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No. 14

October 5, 1918

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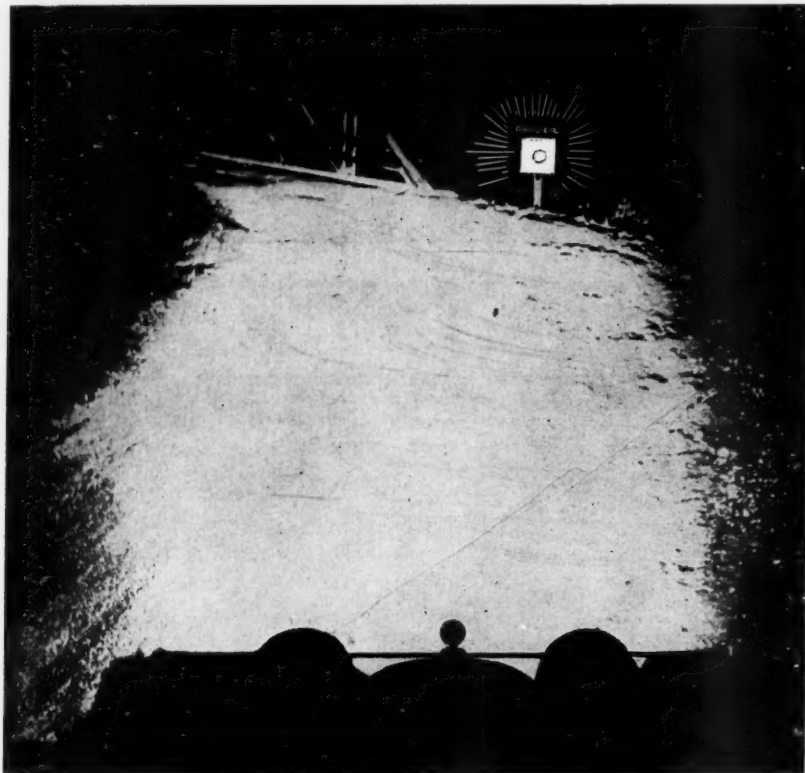
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No. 14

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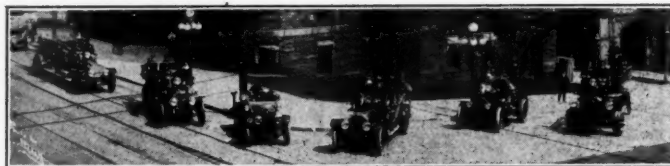
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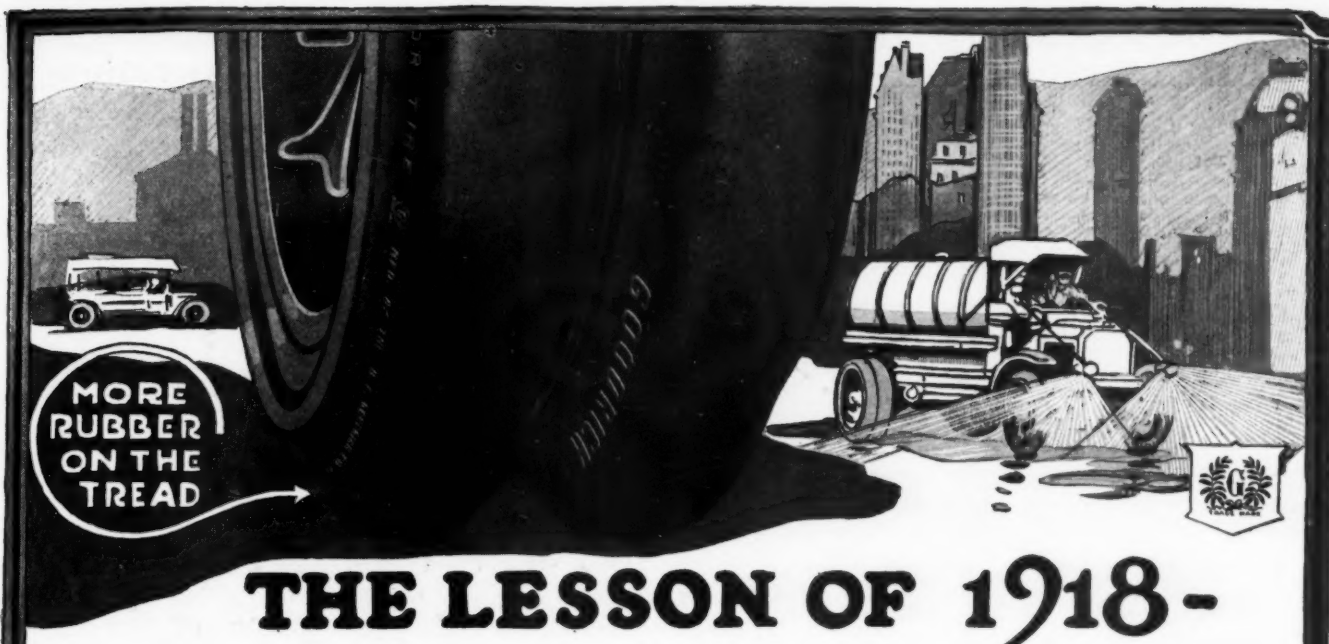
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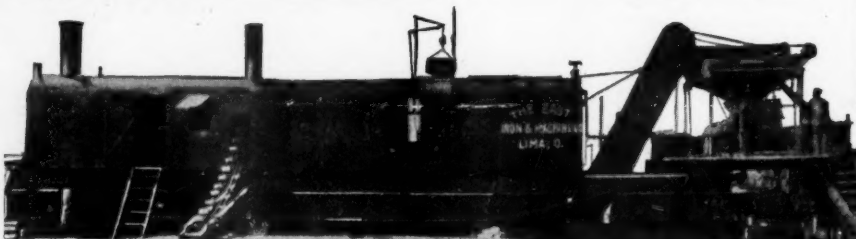
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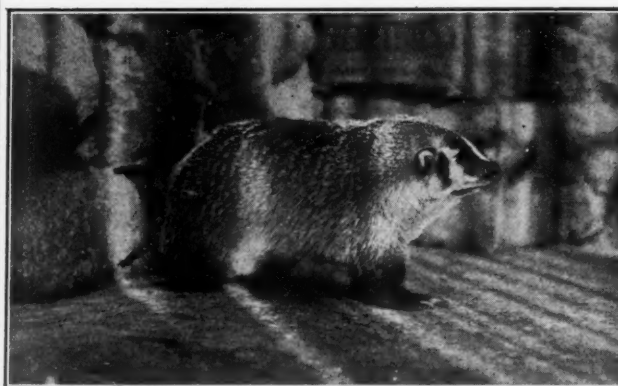
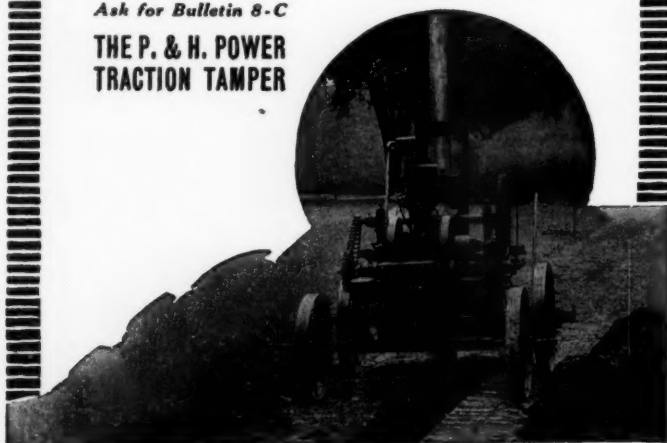
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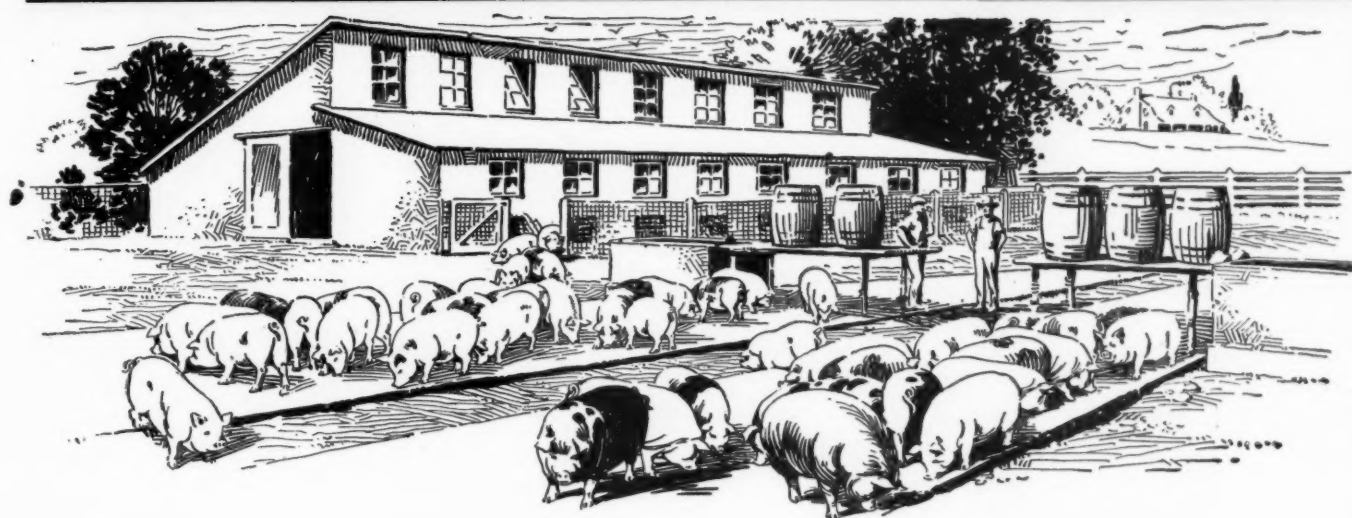
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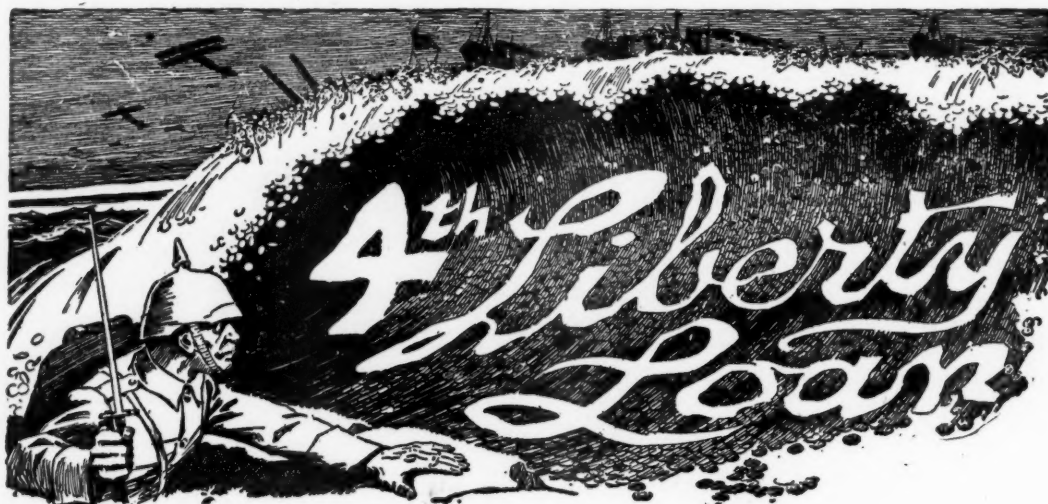
The September number of ALPHA AIDS, a publication issued by us regularly in the interests of engineers, architects, contractors, building material dealers and others interested in concrete construction, gives a summary of what several enterprising municipalities are doing just now in turning the town garbage into a larger supply of the bacon that Uncle Sam needs. Our city of Easton has purchased a farm for this purpose, after looking into the experience of Worcester, Mass., and other municipalities.

ALPHA AIDS tells also how to build a number of different types of hog houses and yards. Some are entirely concrete; others are not. The descriptions are freely illustrated with photographs and working drawings.

If your own community has not started turning garbage pails into boxes of bacon, be the man to head this timely movement. Full information gladly sent, free of all obligation.

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The Enemy Is Watching

By **NEWTON D. BAKER**, *Secretary of War*

The supreme moments of our struggle with Germany have now come.

We have carried our first armies across three thousand miles of ocean and joined the issue of battle with the military power of a nation that has been for forty years preparing its plans and its weapons for its present attempt to dominate the world. We have had to put forth an immense effort and spend a fabulous sum in or-

der to make, in so short a time, an adequate beginning for our gigantic task.

But it is only our beginning. We must follow it with greater energy and support it with increasing power. Men, munitions, ships and supplies must go to Europe in a larger and larger stream. We must redouble our blows and add constantly to the strength of those blows, if our initial effort is not to be wasted.

This Means That Our Fourth Liberty Loan Must Be Larger Than Its Predecessors, More Enthusiastically Supported and More Quickly Than Ever Subscribed

The enemy is watching for the first sign that we are faltering.

Our Government Loans should go "over the top" as eagerly as our soldiers do, in order to carry with them the terror of furious attack. Our dollars must rain upon the enemy as overwhelmingly as our hail of bullets or our storm of shells.

We are fighting for the liberty of the world, for the triumph of our ideals of democracy and self-government over the last great advocate of force upholding injustice. We are buying with our Liberty Loans the security and joy of our people for generations to come. No price could be too high to pay for such a victory—no cost too great for such a purchase.

Lend the Way Our Boys Fight—To Your Very Utmost!

This Space Contributed to Winning the War by

UNITED STATES ASPHALT REFINING CO.

90 West Street, New York

Municipal Journal

Volume XLV.

NEW YORK, OCTOBER 5, 1918

No. 14

WAR SERVICE BY WASTE COLLECTION

The universal question today in every home, in every office and every factory is—"What can I do to help win the war?" The answers offered are legion, some helpful, a few foolish, some personal suggestions, some official requests. The last should in all cases take precedence. It is the purpose of this article to explain what

OFFICIALS IN CHARGE OF REFUSE DISPOSAL.

are asked by the Government to do, and why, and how they can do it.

The coming year will undoubtedly find the waste-collecting forces of most cities reduced in number, or at least in the number of vigorous men; and the first duty of the officials in-charge is to employ every possible measure to continue regular service. There should be less ashes and rubbish to collect, which would reduce the amount of work of the department, and this can be further reduced by making the collections less frequently. As older and less vigorous men will probably be employed, the citizens should be required to use only small ash barrels and, if it is at all possible, *low-hung wagon bodies with low sides* should be used in collecting. Where it has been the practice for the collecting force to bring ash and rubbish containers from the houses to the sidewalks (which service requires an additional man to each wagon or else results in slower collection), it may be necessary to require the householders themselves to roll out their own barrels during the shortage of labor. Whatever the obstacles to continuance of the collection service, every official in charge should make it a point of honor never to "lie down on his job," but should make up his mind that in some way the work of the department can be and shall be performed.

will within a few days or weeks begin practising conservation by reducing the thickness of paper used and also by reducing somewhat the size of page.

It is not so much because of the amount made, however—about 6,000,000 tons a year—that the possibilities of saving in connection with paper are so great, as because a very large percentage of this is used for only a few minutes or at most a few days and is then thrown away as waste material; whereas all of it could be used over again in one way or another, much of it in such a way as to reduce the amount of materials required for original manufacture, thus releasing these for war purposes. To a certain extent this can be effected by using the paper again in its original form. For instance, wrapping paper received in the households can be saved and used by the members thereof or, what would be more important, could be collected and used in industries or for purposes for which new paper is now used; the backs of letters can be used instead of pads for notes, etc.

The greatest saving by re-use, however, is that effected by the re-manufacture of waste paper into numerous products, the more important of which are board from

THERE ARE TWO KINDS OF SAVING—ECONOMIZING IN USE AND RE-USING. THE FORMER IS LARGELY A MATTER FOR THE INDIVIDUAL; THE LATTER, FOR THE MUNICIPALITY. MUNICIPAL OFFICIALS IN CHARGE OF REFUSE DISPOSAL IN EVERY COMMUNITY HAVE A GREAT OPPORTUNITY TO AID IN WINNING THE WAR BY REFUSE RECOVERY.

WASTE PAPER.

Paper is the most generally used of all articles except food, and is probably wasted more freely than any other material. It is so cheap that people pay little attention to economy in its use. Our entrance into the war has introduced new factors into our consideration of the paper question, however. Some of the materials used in making paper, such as pulp-wood, sulphur, chlorine, etc., are growing scarcer and more costly; but of special importance is the fact that labor, coal, sulphur, chlorine, and transportation space used for bringing these to the paper mills and for distributing the manufactured paper, all are needed in carrying on the war.

These and other reasons furnish abundant arguments for the conservation of paper. Municipal Journal and all other periodicals, at the request of the Government,

which ordinary pasteboard boxes are manufactured, the containers now employed so generally for the sale of all kinds of groceries and other articles at retail, corrugated board, wrapping paper, etc. Not only are paper containers needed for the enormous retail trade of the country, but the Ordnance and Quartermaster's Departments of the army are using rapidly increasing quantities of paper boxes and containers and strong wrapping paper for shipments of munitions, food-stuffs and other supplies for overseas. Plaster board is being used by the millions of square feet in the construction of cantonments, hospitals, etc., and paper has been found most satisfactory for making gas masks. For all of these purposes, paper of different kinds which has served its original purpose can be used, but if such waste paper is not available, new materials will have to be employed.

Contempt for a "scrap of paper" has cost the Hun dear. Let's save all our scraps to help make it cost him dearer.

Consequently every pound of waste paper which is collected and put into service again in either its original or another form, releases for such purposes the wood, sulphur, chlorine and other materials used in the manufacture of explosives and other war munitions. Sulphur and chlorine are both being used for this purpose in such quantities that the scarcity of sulphur has recently forced the Government to take over the only two sulphur mines in this country in order to assure itself of an adequate supply for war purposes, while it is possible that the entire supply of chlorine may be needed for the production of gases for war purposes.

To be re-used to advantage, paper should be kept separate from other materials, and the different classes of paper should themselves be kept separate. The latter is not essential, but such separation at the source increases the value of the paper and also reduces the amount of labor required in utilizing it. Newspapers should be kept in one class, brown wrapping papers in another; while the better grades of paper such as that found in old magazines, books, stationery, etc., should be kept by themselves, since these can be sorted out, de-inked, and used again in making books, writing paper and other grades.

Large quantities of waste paper originate in stores and office buildings, but perhaps in the aggregate a still larger amount comes from homes, especially in the form of newspapers and magazines. In the larger cities there are those who make it a regular business to collect paper from those industries where the quantities thrown away are large, but even in these cities there is no systematic collection of paper from residences, and in most of the smaller cities there is no such collection from even the largest sources of waste paper.

If the citizens of the country were told that the saving of paper would aid in the prosecution of the war we are convinced that there would be a general response; but if the matter is allowed to rest here and citizens find paper accumulating on their hands with no information as to what disposal to make of it, they will naturally soon discontinue such saving. Individuals cannot be expected to learn, each for himself, where and how he can forward the papers so saved, nor is it proper that individual citizens should be put to this trouble and expense. It is here that the municipality should offer its services and furnish the advantages of co-operative action. And the department engaged in refuse collection would seem to be the proper one for taking charge of the matter. The service to be rendered may be considered as comprising the instruction of the citizens as to the saving and classifying of waste paper, the collection of such paper by municipal teams, and the forwarding of the paper to the factories, or their agents, by which the waste paper will be utilized. Incidental to the collection, it has been found advantageous in many cities to furnish householders with bags or other receptacles in which the paper can be stored and removed. We would suggest that bags of cheap burlap, but substantially made, be furnished to each household in which there is likely to be any accumulation of newspapers and wrapping paper; and that there also be furnished

Paper is not saved until it is collected.

a card, to be displayed in the window or other point plainly visible from the street, bearing the words "Waste Paper" or whatever else may be thought appropriate; such card to be displayed whenever a bag full of paper is ready for removal. These bags can be used for the collecting of newspapers and other papers classed with them, and the bag itself can be removed and another left in its place, or the bag can be emptied in the collecting wagon and returned. In the case of stores and large institutions, two or more bags can be furnished, thus affording separate receptacles for newspapers, wrapping papers, and other grades; but in residences there will generally be an insufficient amount of the other grades to make this necessary; wrapping paper, old magazines, old books, etc., being merely piled up in a convenient point for the removal by the collector. Collecting wagons may be provided with partitions dividing them into two or three sections for the different classes of papers. As the newspapers and other papers of that class are bulky, a cart with built-up sides giving it great capacity

When the strongest men can no longer be obtained for ash and garbage collection, the less powerful, or even women, should be used; but the receptacles and wagons should be adapted to their strength. Refuse collection is an "essential" and should not be discontinued.

is desirable. In a small city such a cart traveling through all the streets one day a month or week could probably make all necessary collections; while one wagon traveling continuously on a regular circuit could cover all of the area of a city of considerable size.

The books and magazines so collected can be tied up in large bundles for shipment; but the loose papers will need to be compressed into smaller bulk, and for this purpose a baling press of large or small size, as may be necessary, should be used by the department. Several makes of such presses are on the market. The paper so collected is not used directly by any Government agency, we believe, but is purchased by manufacturers who make use of it for the various purposes named and

Recovered paper will help the Allies recover Belgium.

for others as well. Certain of these, such as makers of box boards, are to be found in almost all large cities. Any city which cannot find among its own industries users of these waste papers can undoubtedly be put in touch with such by application to the Board of Trade or corresponding organization in the nearest large city. Arrangements for marketing the paper should be made at the very beginning, since the classification used in collection and the method of baling and forwarding the paper should be in conformity with the desires of the prospective purchasers.

While the collection of paper is recommended as a war service, there is no reason why the city should not make as good a commercial bargain as possible and perhaps obtain a net revenue from the collection and sale of this material. Where the Salvation Army or other benevolent organization is already making a collection, it is not suggested that the city should compete with it; but we believe that in most instances the organization named collects only newspapers, while there will be found, at least in the larger cities, almost as great

a quantity of other paper, especially in offices and other commercial establishments, and the municipality should collect this paper also or endeavor to have it collected by others, as a matter of saving for the public benefit.

The use of boxes or barrels located in the business streets for receiving waste paper should be considered. In cities of any size they have proved most effective in preventing the littering of the streets, and since a large part of this littering is due to newspapers and other papers, they would also serve to increase the amount of such material collected. Even in a small town, one such barrel located in front of the postoffice or at some other central point will be worth while.

Incidentally, in a number of cities municipal officials may aid materially in conservation by reducing the size of their annual reports. From such reports there could be omitted (for one or two years at least) long lists of locations of fire hydrants, inventories of picks and shovels and other tools in the service of the public works department, and other statements which change little from year to year and which are not essential to an understanding by the average citizen of the doings of the municipal departments.

Paper manufacturer uses sulphur (explosives), chlorine (gas shells), fuel (guns). Save those things for the Kaiser. He needs them and our boys will see that he gets them.

FRUIT PITS AND NUT SHELLS.

The Chemical Warfare Service of the United States Army has asked the entire country to aid it in collecting the largest possible amount of fruit pits and nut shells. It has been found that the best carbon obtainable for use in gas masks for the soldiers is derived from such materials, although others can be used for this purpose. So many millions of these masks must be provided and there is such a shortage of the best raw materials that too many of these materials cannot be obtained. Hundreds of tons of them, however, can be furnished by the citizens generally if they will only go to the trouble of saving them instead of throwing them away as heretofore. The materials wanted are as follows:

Pit your nut shells against the Kaiser's gas shells.

Peach stones or pits.
Apricot pits.
Prune pits.
Plum pits.
Olive pits.
Date seeds.
Cherry pits.
Brazil nut shells.

Shells of hickory nuts, walnuts and butternuts.

Pits from cherries imported in brine should not be included, but only pits from native cherries can be used. Special attention is called to prune pits since prunes are consumed the year around. All of the materials can be sent together, as it is not necessary to use them separately, but no material of any kind whatsoever not mentioned in the list above should be included. Large quantities of Brazil nuts, walnuts and butternuts lie ungathered in the woods in many parts of the country, and as the army needs the shells it is hoped that members of war-saving societies, boy-scouts and boys and girls generally

Citizens will gladly save papers, pits and shells. Municipal officials should see that they reach the proper factories. Only then will they help win the war.

throughout the country will collect them in as large quantities as possible. The meats have a good market value and it is suggested that they be extracted, although the whole nut can be used for carbon.

All of these materials should be thoroughly dried before delivery to the central collection point. It is suggested that municipalities might aid greatly in this work by collecting these materials and drying them in large ovens or other dryers, thus insuring that this is done, which might be overlooked by families or other individuals furnishing them. This work, also, would seem to be most appropriately placed in the hands of the official or department collecting municipal wastes, since few if any other departments would have the facilities for making the collection.

Such collection might well be made by one man with a hand-cart, citizens being requested either to hang out notice cards when pits are on hand for collection or to notify the department by telephone. Especially in the smaller municipalities, however, it may be sufficient to place in the central part of the town one or two barrels in which bags or bundles of pits can be thrown by the citizens. Even in large cities this has proved a very effective method of accumulating considerable quantities of these materials, several tons having been collected in the shopping district of New York City in this way.

This matter should be brought to the attention of all citizens by notices in the daily papers or otherwise. The American Red Cross has taken charge of the campaign for collecting these materials, cooperating with the Food Administration which, through its close contact with hotels and restaurants, can aid in collecting large quantities. The municipal officials, therefore, should probably get in touch with the local chapter of the Red Cross and cooperate with it in collecting and drying the pits and turn over the collections to the Red Cross for shipment. Dealers in provisions might be asked to post in their stores cards calling the attention of their customers to the desirability of saving fruit pits, while department stores and others visited by a large number of citizens could place in or in front of their properties, boxes or barrels for receiving them.

Any of the materials named are acceptable no matter how old they may be provided they are sound and thoroughly dried.

Where garbage is disposed of in reduction plants, it should be possible to recover peach pits and other large pits or seeds, and the same may be possible where it is fed to hogs.

The need for large quantities is indicated by the statement that it requires two hundred peach pits or seven pounds of nuts to produce one mask, and that every soldier, Red Cross worker or representative of other organization having men near the firing line must be kept equipped with a gas mask.

GARBAGE.

We have already published so much concerning the utilization of garbage that it hardly seems necessary to repeat the arguments for utilizing the materials and

Garbage produces glycerine—glycerine, explosives—explosives, American peace.

by-products obtained through garbage reduction or feeding to hogs. The cost of reduction plants renders it impracticable to adopt this method of disposal for any except the larger cities. Where such plants are practicable, however, they should be operated to the fullest capacity possible, since they not only utilize fats for the making of soaps and grease, but from them are produced a large part of the glycerine that is used in the manufacture of explosives. So important is this that, when there seemed a prospect that the reduction plant which handles New York City's garbage might be shut down by an injunction as a nuisance, Washington urgently requested that such injunction be not granted, intimating that the plant would be seized and run as a Government enterprise if it could not be run in any other way. In addition, such plants produce a considerable amount of fertilizer base, and fertilizer is very important in the intensive crop production which is one of the duties of this country.

It would probably be difficult for any city to construct a new reduction plant at this time, but those now existing should be operated to the fullest capacity possible. Most cities are finding their garbage collection greatly reduced by food conservation and consequently are operating their reduction plants at much less than maximum capacity. In a number of cases it might be possible to bring to the plant by rail the garbage from all of the surrounding communities within reasonable distance, special cars being used for this purpose. Several plants already carry the garbage to the works from collecting stations in the city by means of such cars, and there would seem to be no good reason why, in some localities at least, the collection service could not be extended to neighboring cities and even smaller municipalities. Such municipalities could establish collecting stations alongside the railroad where the garbage should be collected in an elevated tank provided with a chute, from which tank the garbage could be discharged into

the collecting car in a few minutes, and one car could thus collect the garbage every day or two from a number of small communities. Or the same general idea could be carried out by the use of motor trucks with large tank bodies collecting from all communities within a radius of twenty-five or even fifty miles.

RUBBISH.

Under the head of rubbish is included a number of materials that may be utilized if the matter be given a little thought. In a number of communities wood either for kindling or for use in grates or in combination with coal in stoves and furnaces would be welcome but is very high in price. In almost any collection of rubbish will be found considerable quantities of wood which could be sorted out and sold; some of the most common forms being boxes and barrels and old furniture. For this work the city could utilize prisoners or those too old and feeble for more energetic work. Or, since the work does not require the more vigorous class of labor, it might be performed as patriotic work by boy scouts or other organizations of boys.

Old rope can be saved and picked into loose oakum, which is used by the Red Cross; while all metals now have such value that the recovering of them would probably be worth while from a financial point of view alone.

It has generally been considered that the sorting over of rubbish for recovering materials of value is profitable and practicable only in the case of large cities, but we believe that if the matter were given proper consideration, means could be devised for carrying out the recovery of such waste materials in even small communities. Where it is not thought practicable for the municipality itself to collect these materials, if it would arrange for some one or two dumping places where they could be deposited, the citizens would generally be glad to avail themselves of the opportunity and thus the matter of sorting over the material would be greatly facilitated.

**A LIBERTY BOND IS A "SCRAP OF PAPER" THAT COMMANDS THE RESPECT EVEN
OF GOVERNMENTS THAT "ARE WITHOUT HONOR" AND "OBSERVE NO COVENANTS."
BUY MORE LIBERTY BONDS.**

WATER WORKS OPERATION

Continuation of Discussion on Boiler Room Economy—Draft Regulation—Leaky Boiler Settings— Cause and Remedy of Smoke.

DRAFT REGULATION.

Air is supplied to the fire by means of draft; that is, a greater pressure in the air admitted to the furnace from the outside than there is in the inside of the furnace. The difference may be effected by lowering the pressure of the gases by the suction of a chimney, or by increasing the pressure of the outside air by forced draft, or by a combination of these. The proper regulation of the draft and proper firing are the two most important factors in the economical operation of a boiler.

Any leakage of air through the boiler setting not only reduces the amount drawn through the fire, but it also cools the gases and may thus lower their temperature below the combustion point; in addition to which, heat

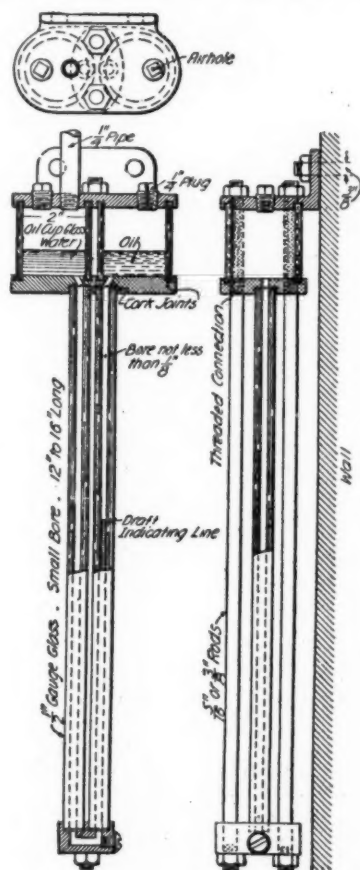
used in heating this air is withdrawn from useful work in heating the water. In most plants there is more or less such leakage and it is by far the most serious of all losses in perhaps the majority of plants.

Such leaks may occur in the metal work around doors and joints as well as in the brickwork. These leaks should not only be stopped with asbestos or stove putty but should be calked with waste or asbestos fiber soaked with fireclay in such manner as to prevent cracking off and falling out as soon as dry. When the visible leaks have been stopped, the remaining ones can be detected by building a smoky fire and shutting the damper, when smoke will be seen issuing from them. When all actual leaks have been repaired, some air will still seep in be-

cause bricks and mortar are porous. This leakage may be reduced to a minimum by applying a coating or paint of material especially prepared for this purpose. Or metal lath may be fastened to the outside of the brickwork and a coat of plaster applied one inch or so thick made of a mixture of about eighty percent magnesia and twenty percent old magnesia pipe covering. A surface should then be trowelled on consisting of eighty-five percent magnesia and the remainder cement in the form of a thin grout, and this surface should then be painted. Such a coating will not only minimize leakage but will reduce radiation loss and will not be affected by temperature changes.

Until a boiler setting has been made reasonably tight there is little use in attending to the fine points of draft and excess air.

There is a very definite relation between capacity, draft, fuel bed thickness and the air passing through the fuel bed. For the best results it is generally necessary to determine these for each plant by actual test. The time should be chosen when the load on the boilers will remain constant for several hours. The fire should be clean, of uniform thickness and free from holes, and the surfaces of the tubes should be free from soot. A draft



From Morris' Steam Power Plant Piping.

A SIMPLE AND SENSITIVE DRAFT GAUGE.

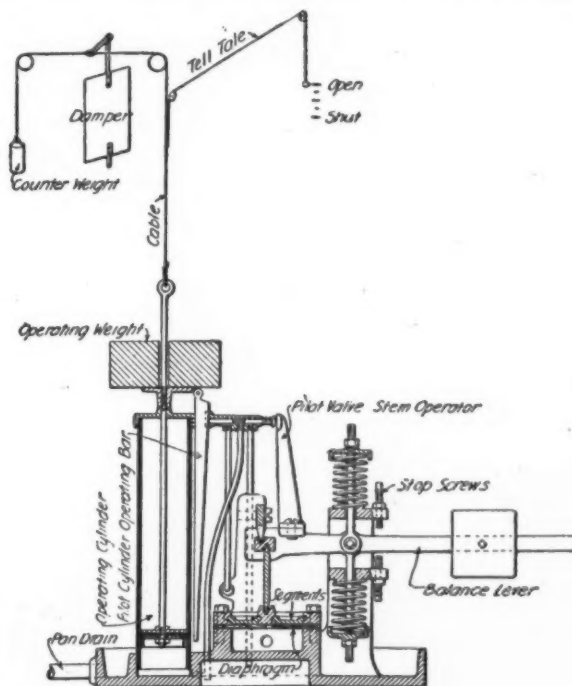
and fuel bed thickness should then be found which will maintain the load without loss of pressure. Simultaneous readings of the draft and analyses of the flue gas should now be made as rapidly as possible and repeated at brief intervals to insure permanence of conditions, and holes should not be allowed to develop in the fire. Care must be taken not to open the furnace doors during a reading. Records should be kept of the drafts, the CO_2 , and the fuel bed thickness.

The thickness of the fuel bed should then be changed and the draft adjusted to carry the load without pressure

drop or without blowing the safety valve. When sufficient time has elapsed to allow conditions to become constant, another set of readings should be taken. If too thin a fuel bed had been used before, it will be found on comparing readings that, as the thickness of the fuel bed is increased the draft increases and also the percentage of CO_2 . Additional tests should be made in a similar way with thicker and still thicker fuel beds until the point is reached at which the CO_2 does not increase as the thickness of fuel bed and the draft are increased. When this point is reached it indicates the proper thickness of fuel bed to give the maximum efficiency for this boiler under the load with which it is being operated.

Unless the load on the boiler remains constant at this point during service, the same determination should be made for the other loads also. With this information, a diagram can be plotted showing the proper thickness of fire and draft setting for each load on the boiler. During the tests, readings should also have been taken on the differential draft gauge, the tubes being known to be clean and the fire in good condition when such reading is made. If, during later operation, the thickness of fire and the draft are correctly maintained, but the differential is too low, it indicates either that the fire is dirty or that some of the baffling has fallen. A too high reading of the differential indicates that there are holes in the fire or that soot is clogging the tubes.

The draft should be controlled by means of dampers in the flue and not by the ash pit doors. Closing the ash-pit doors prevents air from going through the fuel bed, causes clinkers and hot grates, and also increases



From Morris' Steam Power Plant Piping.

ONE TYPE OF DAMPER REGULATOR.

air leakage through the setting. Each boiler should be equipped with a separate damper and its draft regulated by this.

If holes develop in the fire bed, an excess of air will be drawn through these and a deficiency of air through the remaining part of the fire and the result will be similar to that caused by leaking through the boiler setting. In addition to this, holes permit green coal to run down into the ash and clinkers and therefore increase the probability of its passing into the ash-pit unburned.

With careful handling of the fire, the loss due to partly

burned coal in the ash should not exceed about three percent of the heat value of the coal. In case of a stoker-fired furnace, excessive carbon in the ash usually indicates too rapid feed, while in a hand-fired furnace it may indicate that the grate openings are too large for the size of coal used or that the fire is worked too much, or both. So far as possible the fire should be operated without much working except at times of cleaning. Too much working shakes the green coal down into the ash and allows it to pass through the grate bars, and also it brings the ash up into the hot part of the fire where it fuses and causes clinkers. Should a hole begin to form in the fire, it should not be filled with green coal, but with incandescent coal before a fresh charge of coal is applied. In working a fire, it should be sliced from the bottom in such a manner as to avoid or minimize the possibility of forcing ash up into the fuel bed.

SMOKE AND SOOT.

Most of the loss due to smoke does not result from the fact that particles of unburned carbon pass out through the flue, but rather results from the deposit of soot on the tubes. The actual heat value contained in this soot is a very small proportion of the amount of coal fired, but its power to prevent the heat in the gases from reaching the water is very great, soot being about five times as effective a heat insulator as asbestos. Under normal working conditions and with the proper amount of air, the temperature of the gases leaving the boiler should be somewhere near 550° Fahr., and if the temperature is much higher it signifies that the tubes need blowing. Tubes should be blown every four or five hours where there are automatic blowers, and in all cases should be blown at least once for every shift. A pyrometer placed at the point where the gases leave the tubes for the last time will give a fairly good indication of their condition, provided that low temperature is not due to excess air.

Smoke may be due to too small an amount of oxygen, or it may be due to an incomplete mixture of the air with the combustible gases, or to a too small combustion chamber. In any case, increasing the air supply may decrease the smoke, but if the smoke was due to either of the two latter causes it will decrease the efficiency of the furnace.

OTHER LOSSES.

Although moisture in the coal requires a certain amount of heat for evaporating it, which heat is there-

fore lost, in some cases it is desirable to slightly wet down the coal before feeding it. This is because some very dry coals burn out unevenly and will not stay on the grate without forming holes, this applying, however, only to the smaller sizes of coal. With larger sizes, wetting is believed to be never necessary. While water so added results in a waste of heat, it may prevent the leakage into the ash-pit of unburned coal representing much greater loss.

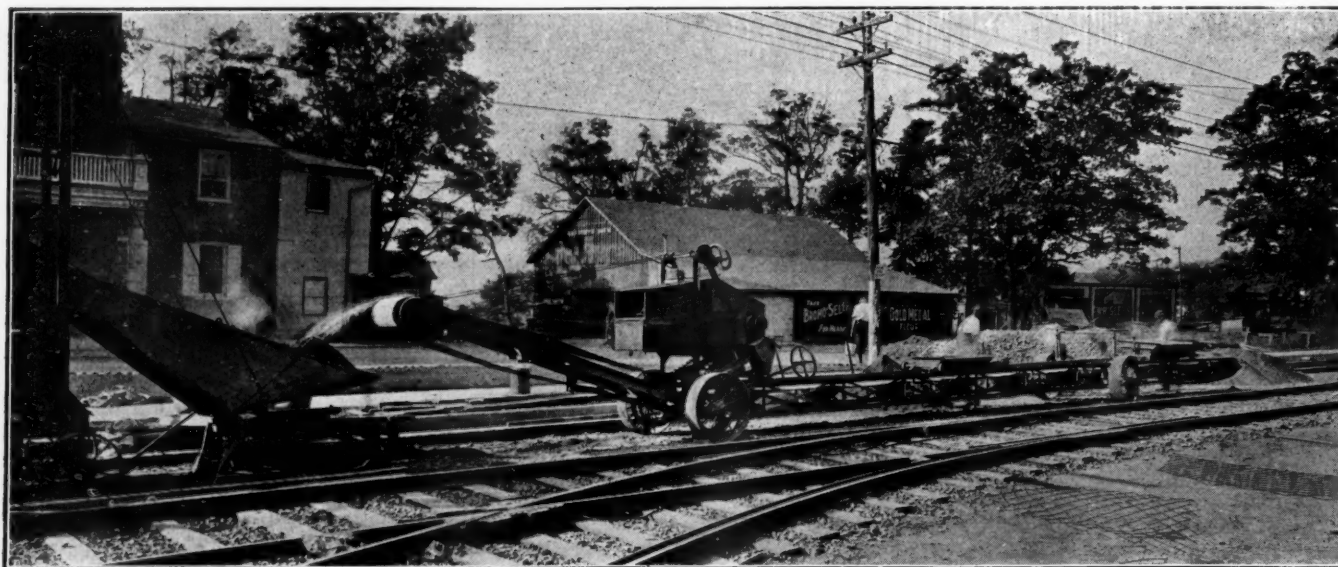
Some heat must be carried off by the gases passing up the stack, but for plants operating on natural draft the temperature of these gases need not theoretically exceed about 500° Fahr. to produce the draft necessary to operate the boilers at full capacity, and in practice an average of 550° is considered sufficient. With forced draft the temperature may be kept lower than this. If a pyrometer in the flue shows a higher temperature, it indicates either an excessive deposit of soot upon the tubes or unnecessary amount of draft.

(To be continued)

CONCRETE MACHINERY ON THE WILLIAM PENN HIGHWAY.

In our issues of October 5 and November 9, 1916, we described the construction of the concrete road forming the first stretch of the William Penn highway extending from Easton, Pennsylvania, across Northampton county. This summer the State Highway Department of Pennsylvania has been extending this highway through Wilson township, the construction employing reinforcement and being similar in most other respects to the section first laid.

The contractors for this work were McNerny & McNeal of Easton, Pennsylvania. In response to our request to this firm that they inform us of any new methods or devices which they were employing in this work, they have replied that they found existing labor conditions made it necessary for them, as for other contractors, to employ every means possible for reducing the labor force. Chiefly with this purpose in view, this firm employed, on the William Penn highway construction, a Koehring concrete loading machine. No definite figures had been taken to show the exact saving in labor or expenses secured by the use of this machine, but they find that it reduces the labor force by dispensing with all wheeling, saves the wages for idle labor when tem-



CONCRETE MIXER AT WORK ON WILLIAM PENN HIGHWAY.

porary delays occur in the work, and that it gives greater efficiency owing to the ease of operation which reduces the task of the individual laborer at the loading end of the mixer. This last item Mr. McNeal believes to be one of considerable importance, in view of the independent attitude assumed by laborers at the present time. As to the first advantage, the importance or money value of this of course varies with the capacity or output of the mixer.

Mr. McNeal describes the machine as follows: "It consists of a belt conveyor carried on a trussed angle iron frame which can be raised or lowered by adjustments through a distance of ten inches. The total length of the machine is approximately 60 feet and the width about three feet. The aggregate is conveyed on a four-ply rubber belt 22 inches wide which travels at a speed of about 500 feet per minute. The capacity of the belt with continuous feed is approximately 100 cubic feet per minute. The conveyor is carried on steel trucks with automatic type knuckle steering axles having a standard gauge of four feet eight inches. There are two pairs of wheels 32 inches in diameter and with eight-inch tires. The machine is capable of turning in a radius of 63 feet. It moves forward under its own power at a speed of 70 feet per minute and reversed at 75 feet per minute. The

operating power is a five horse-power, horizontal, four-cycle, hopper-cooled gasoline engine with five-inch cylinder and eight-inch stroke and making 426 r.p.m. The total weight of the machine and engine is about 6,000 pounds.

"Measuring cars constructed of steel with a top opening 36 inches wide and 48 inches long are placed on top of the carrier and can be adjusted for a capacity of from $3\frac{1}{2}$ to $7\frac{1}{4}$ cubic feet, the adjustment being marked off by lines on the inside of each car. The height of the cars above the ground may be varied between 29 inches and 34 inches as necessity may require. The cars are stationary, but may be moved on wheels to any part of the carrier where they would be most convenient for loading. Each car has a lever attachment by which the material in it is discharged onto the belt conveyor. The sand and stone are shoveled into these cars from piles of these materials placed at convenient points along the road, and dumped from the bottoms of the cars onto the belt by means of a lever, and by the belt carried direct to the receiving chute of the concrete mixer at the end of the conveyor, by which chute it is discharged into the mixer drum in the ordinary way. The belt carries the material quite evenly without spilling and we have found it to be most satisfactory in its operation."

PUBLIC UTILITIES AND HOUSING PROJECTS

Notes Concerning the General Policy of the United States Housing Corporation with Regard to Arrangements with Utility Companies for Serving the Several Housing Developments—Alternative Methods—Rates.

In connection with the various housing projects of the United States Housing Corporation for providing quarters for those engaged in ship building and other war work that attracts great numbers of non-resident employees, it is necessary to arrange for a supply of water and gas, electric lighting, telephone service and possibly other public utilities. Owing to the diverse conditions affecting these several developments it is impossible to lay down any hard and fast rule as to what arrangements shall be made, with local utility companies or otherwise, for providing these services for the new communities. But it is considered by the chief engineer of the Housing Corporation, John W. Alvord, to be extremely desirable that a general policy be formulated as a guide to those having charge of negotiations, "in order that the contractual relations between the Housing Bureau and the utility companies may be kept simple and free from embarrassing situations for those charged with their future administration."

Mr. Alvord has reported on this subject to Otto M. Eidlitz, director, as follows:

"The conditions produced by the war render it increasingly difficult for utility companies to raise large amounts of money for needed extensions. These companies also face the difficulty of securing material at reasonable rates or sufficient supplies of labor at any rate.

"Fortunately many of the developments of the Housing Bureau are comparatively simple in their character and moderate in their demands for utility extensions. In fact, most of them can be properly compared to subdivisions commonly added to small towns and cities in normal peace times. In certain instances, however, when these developments are located beyond the municipal limits of the adjacent city and, therefore, denied the usual contractual relations, the enterprise assumes more the character of an independent community. In such cases the relations between the Housing Bureau and the utilities found in the city are apt to assume a different form

from those cases in which its development is within the municipal limits.

"As a broad, general principle, it is undesirable for the United States Housing Corporation to enter into private business more than is absolutely necessary. It is indeed desirable that the corporation retain, so far as possible, its character as an employer of existing facilities in the manner in which they are commonly useful to other citizens of the community.

"With this general principle in view, it may be further suggested that it would be undesirable for the Government, through its Housing Bureau, to enter into any mixed relations creating divided ownership as between the utility and the Government, or involving the Government, as part owner, in a business enterprise, particularly one over which it will have in the future little or no control.

"There are three ways in which the relations between the Government and the utility may ordinarily be established. These will be described in the order of their preference:

"1. The utility company may extend its services at its own cost into the territory of the housing development under the ordinances prevailing in the community in which it acts, under such standards as have been acceptable to the surrounding municipality and may bear such cost as a part of the total cost of its larger plant. Under these conditions, it may charge the rates prevalent in the community and sanctioned by the State Utility Commission, and from thence forward the Government is free from all responsibility, control or interest in the matter, except such as may belong to any citizen of the community receiving similar service.

"2. In the event of the inability of the utility company to provide the distribution system or service, or both, due to difficulty in financing its extensions, the Housing Bureau, after satisfying itself that the utility company is reasonably entitled to aid and assistance, may make it such loan or advance as in its opinion will enable the utility company to operate the necessary service by extending its distribution system throughout the development. Under such circumstances, it is desirable that the loan from the Housing Bureau be properly secured in the same manner as

any financial transaction should be similarly secured, and that it be repaid in reasonable time, either through partial payments or sinking fund, or an annual payment of a certain reasonable proportion of the revenue it collects from the housing district. In this case the rates for service should still be those generally paid by the adjacent municipality in which the service is being sold, or in the case of an independent development outside of the existing municipality, through special contract, which shall afford rates similar to those of the adjacent municipality, but in all special cases the revenue should be equal and sufficient to produce a fair return upon the invested capital, after allowing for operation, maintenance, repairs and depreciation.

"3. In certain cases where the existing utility is either unable or unwilling to extend its service into the development of the Housing Bureau, and where such service is necessary to the comfort and convenience of the inhabitants of the housing district, it may be desirable, as a last resort, for the Housing Bureau itself to build, own and control the necessary distribution system, but not to operate or maintain the same. Such operation and maintenance and the necessary service received through meter or other method of measurement should be the subject of a contract, the preferred method being to lease the Government-owned distribution system to the utility company, or failing in this, to have the utility company operate and maintain it, collect the revenues therefrom and return to the Government so much of the revenues as are needed for interest and depreciation or fair return upon the capital so invested in the distribution system.

"It is desirable in this latter case that the contract shall provide that as soon after the war as practicable, provision shall be made for the acquisition of the distribution system and its appurtenances by the public utility company. The valuation shall be determined either by original cost or reproduction value at the date of transfer. If possible, it would be well to provide for sinking funds for this purpose, during a term of years.

"It is obvious that the three methods outlined above are desirable from the standpoint of the Government, about in the order in which they have been described, and that the third and last method described being the least desirable method, is to be avoided, if possible. It is to be particularly noted that any deviation from these three methods is, at best, far less desirable than any one of them, for instance:

"Any method is objectionable by which the Government jointly owns the whole distribution system or entirely owns a part thereof, or loans money to the utility in such way as to become involved in the hazards of the business or enters into relations which are so complex and so subject to the vicissitudes of the future, that they may result in embarrassing situations, difficulties of litigation. Therefore, it should be the policy of the Bureau to avoid all partial ownership, all contribution of material or labor or supplies in such a way that it is not clearly understood whether or not the distribution system and its accessories are to be owned as a whole by the utility company.

"This does not mean that the Government may not at its option, utilize its ability to cheaply purchase materials at this time for and in behalf of the utility company and to give this service to them subject to prompt repayment, acting thus only as agent for the utility in purchasing materials on priority rights. Nor does it mean that the Government should not and will not utilize all its efforts in the way of transportation, allotment of labor or other means at its disposal to aid the utility company in its efforts to extend its service into the housing development. But it does mean that the Government should not purchase materials which are installed in the public streets in such a manner as to pass out of its control or to create a joint interest in a distribution system or as to involve the Government in complex relations which may allow the property to pass to other ownership by neglect.

"In extreme cases in entering into contracts with utilities for service, and particularly in those cases where the Government loans secured funds for such extensions, it may be permissible to write off what are known as war costs, that is to say, excessive costs due to the high prices of materials temporarily created by the war. There are two ways of accomplishing this where it becomes necessary:

"1. The simple and most direct way is of deciding at the present time on an approximate estimate of the excess war costs and stating this in simple terms of percentage of the present cost to the utility company.

"2. By providing that at a reasonable period after the war there shall be an appraisal and that the cost of reproduction at that time shall be found and considered in arriving at the then value, as against the present excessive war cost.

"Reviewing these two methods, it is obvious that it is fairer to all concerned to have the arbitration clause included in the contract, as being a frank admission by the Government that the present crisis has created the necessity for emergency expenditures and that the Government should pay as a war emergency cost, the difference if any between the present cost and the future value.

"In many cases, however, it will probably be found that loans to the utilities are relatively so small that the cost of appraisals would hardly be warranted. Under these conditions, it may or may not be best to resort to the first method described and at the present time frankly come to some simple agreement which represents the belief of both parties at interest as to what the excess war costs will be.

"The question of interest on money loaned to public utilities is one to be taken up and decided in each individual case. In most cases it should be the rate of interest during normal or peace times, thus relieving the Government from any excess charge on account of war costs. In certain individual cases, it may be desirable and necessary if possible to forego interest or its equivalent as a part consideration of the loan or at least forego interest or its equivalent during the period of the War or for some fixed and specific time.

"In all cases where the Government buys material for the private utility at its special war prices or priority orders, it should be done in such a manner that the Bureau may be assured that the Utility Company has properly and legally authorized the Government to become its Purchasing Agent and is committed to the return of the money either on delivery of the goods or thirty days thereafter, or through the agency of the loan or advance made in each specific case.

"*Rates for Service*—Rates for service will, as a rule, be governed by the contractual relations of the utility company with the municipality which it serves and in or near which the development may be situated or by the Public Service Commission of the State in which the same is located. In case there is failure of any or all of these methods of determining fair and proper rates, the Housing Bureau shall, through its utility engineer, make such investigations as to the invested capital, present and future operating expenses, maintenance, repair, depreciation and fair return of the utility in question as shall enable him to assure the Government that the proposed rates are fair to the future tenants of the housing development.

"*Authority*—Contracts, agreements, loans and all contract relations with private utility companies shall only be entered into by authority of the Legal Division of the Housing Bureau, subject to the approval of the Director, the Legal Division being assisted by such technical aid, advice and help as can be rendered by the Engineering Division or such of its engineers as are specially qualified for this particular purpose."

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Contributions suitable for this paper, either in the form of special articles or as letters discussing municipal matters, are invited and paid for.

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Municipal Journal's Information Bureau, developed by twenty-one years' research and practical experience in its special field, is at the command of our subscribers at all times and without charge.

SAFETY AND CITY PLANNING.

One of the rules for personal safety impressed upon citizens is not to walk in the roadway at any point except at regular street crossings. But:

Pedestrians wishing to pass west from Tenth avenue, New York, north of Twenty-third street, probably would not find a single street for ten blocks that did not have both sidewalks blocked with trucks which had backed up to the buildings for loading or unloading. Here it is the roadway or nothing for the pedestrian, in spite of the danger.

Last week we referred editorially to the need for consideration of safety in city planning and the above illustrates one of the points which we had in mind. It would appear to be impracticable to prevent this practice of loading and unloading trucks and wagons at the building lines, but the city planner could certainly devise some method for at least lessening the danger resulting therefrom. One plan for doing so was suggested in the series of articles on "Practical Street Construction" in the issue of January 6, 1916; this being the construction of one sidewalk through the center of the street and the omission of the sidewalks along the sides. The sidewalk along the side certainly might as well or better be omitted on such streets, since it is almost never free for the use of pedestrians, while the continual passage of heavy wagons across it results in an early destruction of any ordinary sidewalk construction, and regular roadway construction is desirable for this reason.

An alternative plan would be an elevated sidewalk, either along one side of the street or through the center; but such a sidewalk probably would find little use, it being the experience in practically all cities that pedestrians will almost always rather risk crossing railroad tracks or busy thoroughfares at grade than climb the stairs to overhead crossings. Another alternative that suggests itself is the planning of a passageway through the center of each block, taking the place of alleys as ordinarily located in residence and sometimes in business districts. These could be made not more than six or eight feet wide, or better still, they could be made fifteen to thirty feet wide and a line of shade trees be planted through the middle or one line on each side, so as to be inacces-

sible to teams and given a smooth, clean surface, attractive to pedestrians.

It is not enough to caution citizens against dangerous practices, but those in official positions should make safe practices easier and more attractive than dangerous ones; and much can be done in this respect by wise forethought in city planning.

LIGHTENING THE REFUSE COLLECTORS' LABORS.

The work of loading ashes, and sometimes other refuse, in collecting carts is generally recognized as being work that only the strongest men can perform, and even these are ruptured or otherwise injured in many cases. It seems to us that this condition should never have been tolerated, and the departure to the army of the more brawny men may now compel a reform in this work.

No one who has seen the ingenuity displayed in other labor-saving devices will question the ability of American inventors to provide a method of greatly lightening this work. It may increase the cost of the work—of this we have our doubts, however,—but it should be done as a matter of safety and of justice to the employes. And, as stated, it may be made necessary this winter by the removal of all men who are physically able to do the heavy work now demanded.

Several remedies suggest themselves. One is the use of wagons with drop axles, so that the body hangs within a foot of the ground and the sides are not more than four feet above the ground. This body could be dumped by raising the front end (the rear end being hinged to the rear axle) by one of the contrivances used on trucks for that purpose, or by an appliance at the point where dumping takes place. Or the wagon could carry a loading skip, similar to those used for concrete mixers, into which the ash barrels could be dumped, which in turn would discharge the ashes into the wagon.

For the present it may be impossible for municipalities to obtain any such contrivances, but the labor must be lightened by requiring the citizens to use smaller ash cans or to fill the larger ones only half full; also to provide covers for all cans that will keep water out of them. Meantime it is to be hoped that officials and citizens will express their determination to abandon the present practice that requires men to lift large ash barrels six or eight feet in the air, and encourage inventors and manufacturers to provide more humane contrivances for them.

CURTAIL BRIDGE WORK.

We have received from the United States Highways Council a bulletin (which will be given in full next week) explaining the necessity for the use of as little iron and steel as possible in street and highway bridge work. So great is the demand for iron and steel for military and naval purposes that the use of these materials, even for the indirect war needs of the Federal Government, has had to be curtailed. Therefore those in charge of street and highway bridges should postpone renewals or extensive repairs as generally and for as long a time as possible by careful supervision of all bridges under their charge, painting and other forms of effective maintenance, control of traffic, prevention of the use of weak bridges by road rollers or other heavy vehicles, and by erecting temporary wooden bridges or temporary reinforcement of weak bridges.

The Highways Council believes that favorable consideration during the war period might be given to construction of bridges required as a military necessity, and replacement of unsafe bridges that cannot be repaired or temporarily abandoned, and of destroyed bridges that are essential as a direct or indirect war need.

The WEEK'S NEWS

Government Approves Finishing of Road Work—Council of National Defense Plans After-War Highway Development—Nation, States and Cities in Spanish Influenza Fight—Violations Caused Fatal Newark Blaze—Charter Changes Proposed for Los Angeles—Big Corporation to Finance Public Utilities—Rochester Loses in Six-Cent Fare Battle—Chicago's Traction Ordinance—U. S. Opposes Women on Cleveland Cars—Harbor Improvements for Seattle—New U. S. Housing Contracts.

ROADS AND PAVEMENTS

U. S. to Allow Completion of Road Contracts.

Washington, D. C.—According to a telegram sent out by Charles A. Otis, chief of the Resources and Conversion Section of the War Industries Board, giving a ruling of the Priorities Committee, contractors and others engaged in the construction of street pavements and roadways now substantially under way are authorized to continue such construction. Manufacturers and distributors of, and dealers in, materials used in connection therewith may continue to furnish the same for such construction work up to Nov. 1. Mr. Otis said that applications for permits should be made promptly to the United States Highway Council through the State Highway Department for the completion of all such work now under contract and under construction which cannot be completed prior to Nov. 1. No new contracts should be entered into for any kind of new work without, of course, first obtaining a permit from the Federal Highways Council.

Defense Council's Program for After-War Highway Use.

Washington, D. C.—A definite program of specific use of the highways in support of both the war plan and the reconstruction policy for post-war times was developed by the Highways Transport Committee of the Council of National Defense in a three-day conference of its 11 regional chairmen, representative of every section of the country, held here. Recognition of the highway's value as a transportation resource was evidenced by the appearance before the committee and its chairmen of Cabinet officers, members of the National Railroad Administration, the Food Administration, the War Industries Board, the National Highways Council, the Electric Railways War Board, the Army, and the United States Senate. President Wilson received the conferees at the White House on the conclusion of the sessions. Every one of the Governmental agencies whose war work can be affected by the full utilization of highways transport proposed a close cooperation between his own organization and the nation-wide organization which the Highways Transport Committee, under the direction of Roy D. Chapin, chairman, has achieved in the last nine months. All were glad to suggest means of developing this coordination for America's common cause. Herbert Hoover, Federal Food Administrator, warmly approved the development of the rural express as a means for saving perishable foodstuffs now produced, for stimulating production of more food, for lowering costs of living, and for conserving farming man-power for the soil. Franklin K. Lane, Secretary of the Interior, tied the highways development into his plan for putting millions of returned soldiers and their families on small farms carved by the Government from great areas of public domain now either unused or in need of reclamation. William C. Redfield, Secretary of Commerce, told the regional chairmen that he regarded highway, waterway, and railways as a trinity of economic usefulness, incapable of fullest function unless all factors of it were developed efficiently. Relief for the railways by another of the Highways Transport Committee's projects—the store-door delivery system—was welcomed by Edward Chambers, former vice president of the Santa Fe Rail-

road, now director of traffic in the National Railroad Administration. Mark L. Requa, director of the oil division of the Fuel Administration, asked the committee's cooperation in a campaign to promote more efficient operation of all gasoline-powered vehicles and the conservation of fuel through the stopping of wasteful practices and non-essential running. The Army was represented before the conference by Lieut.-Col. W. D. Uhler, Quartermaster Corps, in charge of Army truck-convoy service. Joseph D. Baker, of the War Industries Board's staff, asked chairmen to help make clear to motorists and garage managers the necessity of saving both materials and man power, and suggested ways in which such savings can be effected. Reports made by the regional chairmen show tonnage moved over the highways increasing at a tremendous rate, in some states as much as 400 per cent increase over last year being shown. The Highway Transport Committee is completing countrywide organization that will number more than 15,000 committeemen, manufacturers, farmers, and consumers, all working through contact with the State Councils of Defense and with the committee's regional chairmen. These chairmen, all but one of whom were at the entire conference, are J. Randolph Coolidge, Jr., of Boston; George H. Pride, New York; C. A. Musselman, Philadelphia; Tom Winn, Atlanta; Harry L. Gordon, Cincinnati; John J. Stockton, Chicago; J. F. Witt, Dallas; Julius H. Meier, Portland, Ore.; L. A. Nares, Fresno; and Earle Brown, Minneapolis. Mr. Brown, who could not attend, was represented by Messrs. Babcock, chairman of the Minnesota Highways Transport Committee, and Mr. Leach, of Minneapolis.

SEWERAGE AND SANITATION

\$1,000,000 to Fight Spanish Influenza.

Washington, D. C.—Both houses of Congress have passed unanimously a resolution appropriating \$1,000,000 for the public health service in aiding local health boards throughout the country in combating influenza. The resolution directs the Secretaries of War, Navy and Treasury to use the medical departments of the navy and army and the public health service in aiding in the suppression of the disease. Immediate consideration was given the resolution after its introduction by representative Gillett of Massachusetts and Senator Weeks of the same state. Its scope was broadened to include other communicable diseases at the suggestion of representative Sherley of Kentucky, chairman of the appropriations committee. The disease has appeared in thirty states, but is epidemic, most generally in New England. The Government is organizing the work of combating the disease, which is spreading rapidly throughout the country, both in camps and civil communities. Medical and nursing units have been mobilized in communities where the epidemic has gained considerable headway under the general direction of a central committee representing the Public Health Service, the army, the navy, and the American Red Cross. Immediate relief for the localities where influenza has gone beyond control of the local authorities will be the main task of the committee. It is explained that the principal relief will be afforded by units at home, for with the possible extensive spread

to other parts of the country it would not be advisable to shift nurses and doctors back and forth. Travelling medical units will be mobilized, however, through the volunteer medical service corps. The Red Cross will provide compensation, travelling expenses, and maintenance, as a war measure, and the work will be kept up until normal conditions are restored. Home defence units will be organized with such nurses as may be spared from other duties, and each unit placed at the disposal of the central committee. Where local funds and buildings are not available, these will be obtained by the Red Cross, which also will open emergency hospitals. It is expected that a pneumonia serum will be widely used in the Government's efforts. Manufacture of the serum is being rushed and large quantities are being turned out, after experimental use at camps.

The disease has been spreading in the camps at an alarming rate, many succumbing to pneumonia following relapse. In the 24-hour period ended noon, Sept. 27, 6,824 new cases were reported to the office of the Surgeon General of the army, an increase of 685 new cases, making the total for all camps to that date 42,367. In the previous day 6,139 new cases were reported, with 723 new cases of pneumonia and 170 deaths. Camp Dix, at Wrightstown, N. J., led all the camps of the country in development of new cases. There were 1,007 new cases at Dix, making a total of 3,995, and 122 new cases of pneumonia were reported at this camp, making a total of 337, with forty-three deaths reported on the day mentioned. Reports from camp Devens show the crest of the influenza wave has passed, although the figure for pneumonia remains high, as does the number of deaths. The day's report shows 271 new cases of influenza, bringing its total to date up to 11,986. The number of new cases of pneumonia for the day was 309, making a grand total of 1,407. Eighty-three deaths were reported. The figures show that about one out of every four men in the camp has contracted influenza, and about ten per cent of these developed pneumonia in serious form. At the Great Lakes training station, Capt. Moffett reported that the disease reached its highest point on September 19 and has been steadily decreasing since. The death rate has been about 1½ per cent. Although the station has not been closed to visitors, liberty for the sailors has been restricted to protect the civil community. Camp Devens, at Ayer, Mass., had over 5,000 cases under treatment, with all hospital facilities overcrowded. In the Second Naval District at Newport, where the disease spread at the very beginning of the epidemic, officials seem to have conditions under control. Some of the army camps in the vicinity have not been affected at all by the disease. Because of the epidemic Provost Marshal General Crowder canceled calls for the entrainment between October 7 and 11 of 142,000 draft registrants.

New York, N. Y.—An appropriation of \$25,000, to be used in coping with the Spanish influenza epidemic in this city, has been authorized by the Board of Estimate. Dr. Royal S. Copeland, commissioner of health, appeared before the board and asked for \$5,000, but on the motion of president Dowling the amount was raised to \$25,000. The disease appears to be gaining a hold on the city. In the 48 hours ending 9 a. m., Sept. 30, 694 new cases were reported in the greater city, with thirty deaths due to influenza and ten from pneumonia.

Boston, Mass.—The city, located near the focus of the influenza epidemic in this county, is the worst stricken of the New England communities. The disease has created consternation throughout the state, hundreds of new cases being reported every day from all parts, there being a total of over 50,000 in the state. The Governor's Council has appropriated \$100,000 from a special fund to be used in the fight to check the epidemic. The work will be carried out by officials of the state board of health and the surgeon general of the state guard. Lieut. Gov. Coolidge made direct appeals for aid to President Wilson, Govs. Graham of Vermont, Milliken of Maine and Beekman of Rhode Island, and

to the mayor of Toronto, Ont. Responses were immediate. Dr. W. F. Draper of the U. S. Public Health Service arrived from Washington. He is paying particular attention to the protection of shipbuilding workers throughout New England. Units of physicians and nurses from Rhode Island, Maine, and Toronto arrived and began work under the direction of the state department of health. With the help of the army and navy medical organizations and the Red Cross which was fully mobilized, several hundred additional physicians and nurses became available for service. Lieut. Gov. McCallum Grant of Nova Scotia, in a telegram to Governor McCall, said: "This province cannot fail to recall with gratitude the magnificent and immediate response Massachusetts made in the time of our urgent need at Halifax. Some nurses have already gone to help you and more doctors and nurses will follow as you may require them." A special hospital train, fully equipped with forty beds for the care of influenza patients, arrived at the East Braintree Station, near Quincy, and was put into service under the direction of the state department of health. The train was sent out from Baltimore by the state of Maryland, acting upon a request from the United States Public Health Service. The state department of health announced an offer of \$10 a day and expenses to registered physicians not in Government service who will come to Massachusetts. All theatres, moving picture shows, dance halls "and other unnecessary places of public assembly" in Boston were ordered closed until October 6 at a meeting of the emergency health committee appointed by mayor Andrew J. Peters. Schools and theatres in Springfield, Holyoke, Lawrence, Lynn, New Bedford, Fall River and other places were also closed by the vote of municipal authorities. In Wakefield all churches as well as schools were closed until further notice. Brockton is hard hit and mayor William L. Gleason ordered all places of amusement and all schools closed. New Bedford donated beds to Brockton, and the training camp at Utica, N. Y., sent nurses. In Quincy, with 5,000 cases, according to official estimates, another emergency hospital was opened, making five in all. Lynn has approximately 10,000 cases of influenza; Brockton, 7,000; Salem, 6,000; Haverhill, 700; Fall River, 600; New Bedford, 1,200; Fitchburg, 200; Lawrence, 100; Lowell, 900 or 1,000; Portsmouth, N. H., 700; Nashua, 1,000; Concord, 80 or 90; Manchester, 200; Newport, R. I., 3,000; Woonsocket, 700.

Four Counties Join in Tuberculosis Hospital.

Tiffin, O.—Seneca, Wood, Hancock and Crawford county commissioners have decided to accept the invitation of the Lima district in erecting and financing a tuberculosis hospital for nine counties. According to an estimate the cost of an addition that must be added to the hospital which already exists at Lima to accommodate patients from four extra counties will be \$100,000.

STREET LIGHTING AND POWER

Street Lighting Bills Reduced.

Salt Lake City, Utah.—A saving to Salt Lake county of \$1,361.24, or approximately 20 per cent, was effected in the operation of street lights for the first seven months of this year, according to a report submitted by Myron Manwaring, electrical engineer employed by the county commission. Up to August 1, the street lighting system of the county consisted of 822 street lights, including necessary transformers and wire. The cost of operating and maintaining this system for the first seven months of 1917 was \$7,066.81, as against \$5,705.57 for the first seven months of 1918. Last April 4, the commission authorized Manwaring to proceed with the installation of 525 additional street lights in various parts of the county. The engineer's report showed that this work had been completed for \$2,707.70 below the estimated cost. The commission also authorized the installation of thirty street lights at Bluffdale and fifty on the Twenty-third East highway. The material for this work is on the way and will be installed

soon after its arrival. A total of 705 additional street lights has been ordered by the commission this year. The Utah Power and Light Company installed fifty lights for the county at Draper, and fifty lights are being put in place at Garfield by the Progress Company. An increase of practically 100 per cent in street lighting has been effected in the county this year.

British Municipal Plant Raises Rates.

Glasgow, Scotland.—The accounts of the Glasgow Corporation Electricity Department for the financial year ended May 31, 1918, show that the total revenue for the year was \$3,839,673, and the working expenditure \$2,641,127, an increase of \$1,014,996 and \$673,095, respectively, over the preceding year. Interest on loans absorbed amounted to \$449,927, and sinking fund, etc., \$421,195, while \$292,642 was written off as depreciation, leaving a surplus of \$34,771. This has been transferred to the reserve fund, which now amounts to \$139,629. The number of consumers on May 31 was 35,499, an increase of 775. The committee agreed to recommend that in consequence of the further advance in the price of coal, amounting to 97 cents per ton, and the increasing cost of wages and material, combined with the increased amounts payable for interest and sinking fund, the charges for electric energy as from the date of the last survey of the financial year 1917-18, until further notice, be increased by \$0.0015 per unit, or one-sixth cent over the highest of last year's charges. The scale of charges will, therefore, be as follows: For private lighting, shops, warehouses, offices, and places of entertainment for any quantity of current equivalent to 600 hours of maximum demand for one year, 10 cents per unit, and for all current over that quantity 3 cents per unit; while for domestic consumers, churches, and schools there is a uniform charge of 8 cents per unit. For motive purposes the charge is 4 cents per unit for current equivalent to 1,000 hours of the maximum demand and 2 cents per unit for over that quantity.

FIRE AND POLICE

New York Police Work for Liberty Loan.

New York, N. Y.—Frederick A. Wallis, fourth deputy police commissioner, has announced the part members of the police department will take in the Fourth Liberty Loan drive. He said that prizes will be offered members of the force and police reserves as an incentive for them to obtain bond purchasers. These prizes will aggregate \$3,850 in Liberty Bonds, and he expressed confidence that the department will raise \$50,000,000.

Factory Owners Guilty in Newark Fire.

Newark, N. J.—The recent American Button Company fire with its resulting eleven fatalities, was "brought about and caused through the gross negligence of the officials of the company," according to the finding of the coroner's jury. Immediately after the verdict became public, prosecutor Harrison intimated strongly that the factory fire matter would be brought to the attention of the grand jury. Technically, the inquest was conducted into the death of the boy whose charred body was found in the factory after the fire. But this is merely a legal formality, and although the verdict and conclusions are stated as of his death, they are intended to apply as to the fire and the deaths of all eleven victims. Attached to the verdict were the following specific conclusions arrived at by the jury from its consideration of the testimony: "We find from the evidence that the fire was caused by a spark from the electric fan used in the lacquer department in the said American Button Company's factory on the second floor, which spark ignited the lacquer, which, the testimony shows, was of a highly inflammable character. We find further that the death might have been avoided if the factory laws of the state of New Jersey had been complied with, regarding (a) fire drills, and (b) safeguarding of stairways by protecting them with fire resisting material

as ordered by the department of labor and provided for by the statute law of the state of New Jersey. That the orders issued by the department of labor, November 27, 1916, requiring and directing the American Button Company to construct fire retarding doors and stairways were not complied with up to the date of the fire. That the condition in the factory had not been inspected since November, 1917. That it appears conclusively to us by the testimony of more than ten employees that there had been no fire drills for a period of at least a year preceding the fire, and no instructions or directions given to employees on what to do in the event of fire. That the fire alarm system was used for other purposes and was not strictly confined to the giving of warning in case of fire. That the electric fan from which the spark was discharged was installed and used without the permit or knowledge of the building department of the city of Newark, as required by its regulations. While we have called attention to the failure of the American Button Company to comply with the regulations and directions of the department of labor and without qualifying our findings in that regard, yet we are impressed with the testimony of the commissioner of labor to the effect that with the small force in his department at his disposal for such purposes, it is practically impossible to make an inspection and examination of factories and workshops more than once a year."

Safety Zones Put Policemen Out of Jobs.

Waco, Texas.—In addition to providing safety for the citizens, the red and white safety zone marks have resulted in the discharge of six Waco policemen, following a conference participated in by mayor Ed. McCullough and chief of police Guy McNamara. The reason for cutting the six policemen off the city's pay roll is understood to be that there is no necessity for so many officers now that the safety zones have been provided. The effort at raising the salaries of Waco police, it is said, has nothing to do with the discharges.

Village Business Section Wiped Out.

Hope, N. J.—The entire business section of the village of Hope, ten miles from Hackettstown, was wiped out by fire, causing an estimated loss of nearly \$100,000. The fire departments of Hackettstown and Belvidere, and of Stroudsburg, Bangor and Easton, Pa., were summoned to the scene. The fire started in a barn in the rear of a store. No lives were lost. The buildings destroyed included five stores, residences and a church. The fire was gotten under control by the pumping engine of the Easton department, which pumped water from the stream at the old mill. The loss of these stores leaves Hope without a store of any description. The telephone wires came down at the beginning of the fire, and it was necessary to go out of town to summon the fire departments of the neighboring towns. The central switchboard and postoffice were located in the general store, which was burned. The chemical engines from Hackettstown, Belvidere and Bangor were unable to make any headway against the fire, despite the unremitting efforts of the firemen. It was not until the arrival of the heavy Easton apparatus that the fire was stopped.

Safety Department Without Funds.

Canton, O.—The safety department of the city is "broke" and the funds of the service department will be exhausted November 1, city auditor S. E. Barr has informed the council. The situation in the safety department is the most serious, as the city can only legally borrow \$10,000 more this year, and that sum will be needed for a large part in meeting the payroll of police and firemen due October 5. The city has already this year borrowed \$25,000 for this department, while in addition to the \$10,000 needed now about \$35,000 more will be needed up until January 1. Council passed an ordinance authorizing the issuance of \$10,000 in certificates of indebtedness for the safety division following Barr's communication. Barr told council the city will have to sell \$35,000 in bonds to take up the notes issued in order to meet the situation it now faces.

GOVERNMENT AND FINANCE

To Vote on Charter Changes.

Los Angeles, Cal.—Eight charter amendments have been ordered on the ballot for the general election November 5 by the city council. They include an amendment for an additional tax levy of 10 cents on the \$100 valuation in addition to the regular \$1 tax rate, to be used for permanent municipal improvements, and an amendment providing for the election of 15 councilmen from districts and increasing the terms of all elective officers from two to four years, which would result in a municipal election every four years instead of two. The others are amendments legalizing the license procedure; one providing for procedure in laying out streets; an amendment providing for pensions for all municipal employees; another amendment changing civil service regulations and placing in the charter rules now enforced by ordinance; an amendment providing for a more liberal police and firemen's pension fund, and an amendment authorizing the public service commission to sell power, water and lands, which is necessary to legalize the proposed purchase of the distributing system of the Southern California Edison Company.

Pre-Billing of Taxes Effective.

Detroit, Mich.—Judging by the initial success of the pre-billing of taxes required by the new charter, the system will be completely installed by next year, in the opinion of the Detroit Bureau of Government Research of which Lent D. Upson is director. Collections for the regular thirty-day period for the past two years compare as follows:

	1918.	1917.
Total levy	\$22,011,493.22	\$16,219,695.87
Amount collected	8,037,359.62	4,282,812.26
Percent collected	36%	26%
Properties taxed	283,000.00	ca 274,000.00
Bills mailed	130,000.00	ca 62,000.00
Bills called for.....	153,000.00	212,000.00
Percent called for.....	54%	77%

Financing Corporation for Utilities.

New York, N. Y.—Plans are being completed for the forming of a corporation to be known as the Essential Industries Finance Corporation by a group of leading bankers, whose chief function will be to give financial aid to public utility corporations and other industries essential to the war. Interests connected with the new company that will be represented on the board of directors are Chase Securities Co., Guaranty Trust Co., Central Union Trust Co., First National Bank, J. P. Morgan & Co., J. & W. Seligman & Co., E. W. Clark & Co., of Philadelphia, General Electric Co., Westinghouse Electric & Manufacturing Co., and United Gas Improvement Co., of Philadelphia. Eugene V. R. Thayer, president Chase National Bank, will be president of the new corporation, and Frederick Strauss, of J. & W. Seligman & Company, and Gerhard M. Dahl, vice-president Chase National Bank, will be vice-presidents. Organized under New York law, the corporation will begin business with \$3,000,000 of capital, divided between \$1,000,000 of stock, \$1,800,000 of ten-year debentures and \$200,000 surplus. Of the stock \$200,000 Class A shares will be limited as to dividend and will be sold at par. Class B stock, aggregating \$800,000 and having no restrictions, will be sold at 125, providing the \$200,000 surplus. As the business expands, it is planned to increase the capital, which will probably reach \$20,000,000 ultimately. On that basis the corporation will be able to borrow about \$50,000,000 from the War Finance Corporation. Pending the flotation of the Fourth Liberty Loan the Essential Industries Finance Corporation will not do any financing. After the sale of the government bonds the corporation will be ready to consider propositions from utilities for financing extensions. It is purposed to make the resources of the corporation available to existing utility corporations which need aid in enlargement of plant for essential purposes, but not to undertake construction for new

enterprises. The plan is the outgrowth of recommendations made some time ago by the bankers' advisory committee appointed by governor Harding of the Federal Reserve Board. These recommendations provided for a \$100,000,000 corporation, but the proposals were abandoned because the United States Attorney-General held that the war finance corporation act would not allow that corporation to lend more than about \$50,000,000 to any one concern. The recommended \$100,000,000 corporation, it had been thought, would be able to borrow about \$300,000,000 from the War Finance Corporation. There was decided strength in the public-utility security market following the announcement of the corporation. Public-utility circles were little concerned over the announcement coming from Washington that President Wilson would not appoint a federal commission to look after the needs of public-utility corporations, and that the matter would be left for the state and city authorities to look after. The opinion prevailed that should such a body have been appointed it would be so swamped with applications for financial assistance and higher rates that it would be an almost physical impossibility for the commission to review all the cases. On the other hand, the local bodies have had these cases under supervision for so long that it can be very easily handled by the state commissions. Furthermore, it was pointed out that President Wilson, Secretary McAdoo and Controller of the Currency John Skelton Williams have long ago made known their position on the question of giving aid to the utility companies, and that their position is also known by the local boards. As regards financial aid, it was stated that this could very easily be arranged if the companies in need of such assistance are given an increase in rates to cover the additional interest charges. Earnings in most cases at present are not sufficient to cover these charges was the opinion.

TRAFFIC AND TRANSPORTATION

City Loses in Fare Fight.

Rochester, N. Y.—The New York State Railways, Rochester Lines, has won its case for a higher fare between Rochester and Charlotte. Supreme court justice George A. Benton has handed down a decision in the case of the municipality against the company, in which he holds that a 5-cent fare is confiscatory because the company cannot operate on that basis without a loss. The Public Service Commission, Second District, has the power to determine what is a just and reasonable fare. An appeal from the decision will be taken by the city. The city's attempt to force the Rochester Lines of the New York State Railways to carry passengers between Rochester and Charlotte for a 5-cent fare began in 1915 when the bill annexing Charlotte to the city was passed by the State Legislature. The bill became effective on Jan. 1, 1916, and provided that the fare should not be more than 5 cents. An injunction was granted later by justice Sawyer in the supreme court of Monroe county which prevented the enforcement of a 5-cent fare. Since that time the company has been collecting a 10-cent fare and giving each passenger a 5-cent rebate coupon which would be cashed by the company providing the 5-cent fare was upheld by the courts. In his opinion, Justice Benton holds that the claims made by the city in the rate proceedings are on their face fallacious and says "that the concrete question to be answered is: will the statute reducing the fare to 5 cents lessen the revenue below a fair and reasonable return? If the evidence shows that the result will be no revenue and an annual deficit unquestionably the statute is void. It takes property without compensation and denies to the New York State Railways the equal protection of the laws. The figures and calculations are pre-war experiences. Equity requires a court to make its decrees under conditions as they are at the time of trial. It is common knowledge and so a matter of judicial notice that while there is now congestion of traffic, there is also an increasing struggle for existence by railway corporations. Trolley stockholders lose

their investments. Bondholders surrender to the company percentage of their holdings—bonds are harder to float even at higher rates or reduced quotations. There are receiverships, foreclosures of trust mortgages, actual or imminent, a constantly increasing cost of labor and material, and an increasing rate for both freight and passengers. At such a time a statute cutting rates in two can have but one effect. Manifestly, there should be a fair adjustment equalizing the rights of the corporation and the public."

To Vote on Chicago Traction Ordinance.

Chicago, Ill.—The citizens are to have an opportunity of voting on the new traction ordinance recently approved over the mayor's veto by the aldermen. Two petitions asking injunctions to prevent the printing of the traction ordinance question on the ballots for the Nov. 5 election were dismissed by judge Frederick A. Smith in the circuit court. Both petitions assailed the right of the city council to order the traction ordinance to be submitted to the voters, charging the ordinance as illegal. The court ruled that the ordinance was valid; that all legal steps necessary to submit it to the voters for their approval had been taken by the city council, and that he saw no reason why the election commissioners should not place it on the ballot.

No Women on Cleveland Cars.

Cleveland, O.—Henry B. Deilman and Miss Margaret Russanowska, of the Federal Department of Labor, have announced a decision that women conductors must be removed from the cars of the Cleveland Railway by Nov. 1. The company had employed about 250 women, 160 of whom have been handling regular runs. The investigators say: "It is true that the company will have to lower its labor standard somewhat, owing to the extraction of the best men from civil life into the military service of the country. However, every industry in the country has been forced to do likewise. But the excellent railway service of Cleveland will suffer no great detriment by the lowering of the strict standard adhered to by the company in the past. No special inducements of any kind have been offered to men; on the contrary, special consideration shown women applicants has deterred men from applying to some extent and induced others to quit the service of the company. If male applicants will be allowed a remuneration for the ten-day training period, and schools of instruction, which have proved a success with women applicants, will be introduced for men, and the company's employment agent will make a more determined effort to recruit men from the fair labor market in Cleveland, there is no reason why the shortage should not be filled with men." J. J. Stanley, president of the railway, said the decision will work untold hardship on the riding public and may seriously affect the city's industries. Fielder Sanders, city street railway commissioner, said the decision will mean the worst service in the history of transportation in the city. The investigators were called in after there was almost a strike of union employees as a protest against the employment of women conductors. The union men denied the company's claim that a shortage of man power made employment of women necessary.

CITY PLANNING AND HOUSING

Not to Prosecute Minor Housing Violations.

New York, N. Y.—Owners of tenement-house properties are pleased at the announcement that it is the policy of tenement house commissioner Frank Mann not to issue "violations" during the war unless the condition of the property warrants immediate attention to avert dangers resulting from bad sanitary conditions or fire-hazards. Commissioner Mann states: "The department has saved owners of tenements a vast amount of trouble and expense since the first of the year by refraining from issuing orders of a structural character where no dangerous or unsanitary condition exists." "What can the city or public gain," asks commissioner Mann, "by unduly harrassing owners with orders to plaster the cellar ceiling, to con-

crete the cellar floor, or to alter minor structural conditions which have been in existence for many years without detriment to occupants? Cost of prosecuting such matters at the present time is a greater expense to the city than the value thereof; consequently, the department believes in taking a commonsense view of the situation—a policy which has the double effect of cutting down needless expense for the city and property owner and of enabling the department to concentrate more fully upon matters of a really urgent or dangerous character." Explaining the policy of leniency in trivial matters, commissioner Mann said that the let-up does not mean that detrimental conditions are to be permitted, but wherever it was found that no interest would be hurt by a continuance of a condition which ordinarily under the law should be remedied, no action will be taken. "It is almost impossible," said commissioner Mann, "to make alterations or larger repairs with any degree of promptness or satisfaction, owing to the unusual situation in both the labor and in the material markets, and to compel compliance with trivial matters is therefore a greater hardship under these circumstances." This statement is interesting in view of the recent suggestion by the budget committee of the Real Estate Board of New York which is surveying the city's finances in search of "non-essential" expenditures which might be cut down. The committee suggests a saving of \$600,000 by the supervisor, for the duration of the year, of the work of the tenement house department. "There is no work for the tenement house department to do at present," says the committee. "All the old law tenements have long since been inspected and forced to standardize, and the new law tenements permitted to be built can easily be taken care of by the various building departments." The committee suggests that the inspection force of the tenement house department be distributed among the various building bureaus, and only the administrative force be retained.

Seattle Votes Millions for Harbor Improvements.

Seattle, Wash.—The voters of the port district have approved four propositions for the development of the port. Proposition 1—Enlargement of comprehensive scheme at Smith Cove. Proposition 2—For \$1,990,000 of bonds to construct the second unit of the Smith Cove terminal. Proposition 3—For \$1,250,000 of bonds to acquire land and sites for expanding this terminal. This bond issue is contingent upon the legislature increasing the port district bond issue above the existing 3 per cent. Proposition 4—For \$1,250,000 to purchase docks and warehouses planned by the government on Harbor Island. This issue is contingent upon the government building these wharves and warehouses and upon the legislature increasing the debt limit above 3 per cent. Purchase of the properties will be consummated in five years.

New Government Housing Contracts.

Washington, D. C.—The department of labor announces that a contract for 576 houses for the same number of families, and the utilities and town planning at project No. 503, Philadelphia, Pa., has been awarded to Roydhouse Arey Co., 1209 Fidelity Building, Philadelphia, Pa. A contract for 328 houses and the utilities and town planning at project No. 1368, Seven Pines, Va., has been awarded to Owens-Ames-Kimball Co., Grand Rapids, Mich. A contract for 119 houses accommodating 174 families and the utilities and town planning at project No. 457, Hammond, Ind., has been awarded to Wells Bros. Construction Co., Chicago, Ill. A contract for 78 houses accommodating 90 families and the utilities and town planning at project No. 59, Bath, Me., has been awarded to Leighton Mitchell Co., 95 Milk street, Boston, Mass. All these contracts are on a fixed fee basis. The contract for 75 houses at Niles, Ohio, project No. 481, has been awarded to Yoho & Hooker, Akron, Ohio. The contract is on lump-sum basis. Bids have also been requested by the United States Housing Corporation for the construction of the following projects: Waterbury, Conn., 149 houses; Indian Head, Md., 100 houses, 1 school and 3 dormitories. Contract was awarded to Ed. Schoeck, 79 Montgomery street, Waterbury, Conn., for clearing site at the Waterbury project.

NEWS OF THE SOCIETIES

Oct. 7-9.—AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS. Annual meeting, Chicago, Ill. Acting secretary, A. D. Williams, Morgantown, W. Va.

Oct. 14-17.—AMERICAN PUBLIC HEALTH ASSOCIATION. Annual meeting, Boston, Mass. Secretary, 126 Massachusetts Ave., Boston, Mass.

Oct. 15-18.—CALIFORNIA CONFERENCE ON CITY PLANNING. Annual conference, Riverside, Cal. Secretary, Charles H. Cheney, Crocker Bldg., San Francisco, Cal.

Oct. 15-19.—LEAGUE OF CALIFORNIA MUNICIPALITIES. Annual convention, Riverside, Cal. Executive secretary, W. J. Locke, Bureau of Municipal Reference, Alameda, Cal.

Oct. 16-17.—LEAGUE OF MINNESOTA MUNICIPALITIES. Annual convention, Rochester, Minn. Secretary, Prof. Richard R. Price, University of Minnesota, Minneapolis.

Oct. 17-19.—KANSAS PUBLIC SERVICE ASSOCIATION. Annual convention, Kansas City, Kan. Secretary, W. W. Austin, Cottonwood Falls, Kan.

Nov. 6-8.—CITY MANAGERS' ASSOCIATION. Fifth annual convention, Roanoke, Va. Secretary, H. G. Otis, city manager, Auburn, Me.

Nov. 14-15.—WASHINGTON STATE GOOD ROADS ASSOCIATION. Annual convention, Pasco, Wash. Secretary, Clancey M. Lewis, Seattle, Wash.

Dec. 3-6.—AMERICAN SOCIETY OF MECHANICAL ENGINEERS. Annual meeting, New York, N. Y. Secretary, 29 West 39th St., New York City.

Minnesota Joint Engineering Board.

At a recent meeting held in St. Paul, the Minnesota Joint Engineering Board elected the following officers: President, W. F. Hoyt; vice-president, R. J. S. Carter; secretary-treasurer, G. H. Herrold.

American Public Health Association.

The U. S. Public Health Service is asking Congress for a ten million dollar deficiency appropriation for war-time health purposes. The efforts of the service is to be concentrated in communities congested by war preparations such as industrial centers, various surrounding campments, ship yards, etc.

The consideration of the war program of the Public Health Service will take up a full session on Tuesday evening, October 15, at the annual meeting of the American Public Health Association. Surgeon General Blue, assistant surgeons general McLaughlin, Schereschewsky, and Warren, and surgeon J. O. Cobb, will outline the plans of the Public Health Service in detail. A round-table discussion will follow these presentations.

The passage of Senate Resolution 63 is advocated. This proposes to establish a Sanitary Reserve Corps and the commissioning in the Public Health Service of men of national repute in the various phases of health administration.

Full-time health officers for all states is urged and also for municipalities. In larger communities a health appropriation of fifty cents per capita

will be recommended, with a minimum appropriation of five thousand per annum for smaller towns.

The program contemplates a thorough supervision of all war industries and communities surrounding them; railway sanitation for the benefit of both employees and the traveling public; supervision of milk, water, and food supplies; infant welfare, etc.

Among the more important addresses at the Public Health Association convention will be the following:

Col. V. C. Vaughan, M. C. "The Health of the Civil Population in War Time."

Major William H. Welch, M. C. "Some Public Health Problems and Opportunities Created by the War."

Dr. Charles J. Hastings. Presidential Address.

Dr. George E. Vincent, President Rockefeller Foundation. "Team-play for Public Health."

Lee K. Frankel, Ph. D., Treasurer, American Public Health Association. "Future of the American Public Health Association."

Ernest S. Bishop, M. D., New York Polyclinic Medical School. "War-time Importance of Narcotic Drug Addiction."

As usual there will also be section meetings devoted to public health administration, industrial hygiene, la-

boratory, vital statistics, food and drugs, sanitary engineering, and sociological health problems.

The convention will be held October 14-17, with headquarters at Hotel Morrison, Chicago.

Programs may be obtained from the secretary of the American Public Health Association, 126 Massachusetts avenue, Boston.

Pacific Coast Association of Fire Chiefs.

Fire chief Louis Almgren, of San Diego, was unanimously selected to succeed fire chief W. E. Wallace, of Modesto, as president of the Pacific Coast Fire Chiefs' Association at the conclusion of its twenty-fifth annual convention recently held in the Hotel Oakland, at Oakland, Cal. Fire chief Elliott Whitehead, of Oakland, was elected first vice-president and former chief Harry W. Bringham, of Seattle, was re-elected secretary. Fire chief Joseph Wood, of Renton, Wash., was elected treasurer. The vice-presidents elected to take charge of provinces were as follows:

Thomas Davis, of Vancouver, for British Columbia; Walter Steinmetz, of Alameda, for California; W. A. Foster, of Boise, for Idaho; Fred Martin, of Butte, for Montana; R. B. Hawcroft, of Reno, for Nevada; B. F. Dowell, of Portland, for Oregon; C. E. Carlson, of Tacoma, for Washington; William Bywater, of Salt Lake, for

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PROBLEMS CITIES ARE STUDYING WITH EXPERTS

Bethany, Mo., is to make improvements to WATERWORKS and DAM. The consulting engineer for the work is M. G. Hall.

A SMOKESTACK is to be built by Ellis, Kans., the consulting engineer firm of Black & Veatch having prepared the plans.

WATERWORKS IMPROVEMENTS are to be made by La Crosse, Kans., plans having been prepared by the consulting engineers, W. B. Rollins & Co.

Wyoming county, Tunkhannock, Pa., is to build a reinforced concrete BRIDGE according to plans and specifications prepared by the consulting engineering firm of Smith & Welles.

Reinforced concrete BRIDGE with steel lift span is to be built by Cole county, Jefferson City, Mo. The consulting engineers for the structure are the firm of Waddell & Son, Inc.

ELECTRIC LIGHT PLANT and WATERWORKS IMPROVEMENTS, including a large concrete reservoir, are to be made by Pierre, S. D. Plans and specifications for the work were prepared by the consulting firm, the Henningson Engineering Co.

A concrete BRIDGE is to be built by Mayfield, Pa., the engineer for the structure being Benjamin Anthony.

Outfall SEWERS are to be built by Merchantville, N. J., from plans and specifications prepared by the engineering firm of Remington & Vosbury.

Gogebic County, Bessemer, Mich., is to develop a 100-acre county PARK. The landscape architect preparing plans for the improvement is G. L. Nelson.

Bernalillo county, Albuquerque, N. M., is to relocate and build 4½ miles of HIGHWAY, according to plans prepared by the consulting engineer, J. A. Whittaker.

Hardin county, Eldora, Ia., has let contracts for constructing two BRIDGES. Plans for the structures were prepared by the Marsh Engineering Co.

The development of the passenger and freight RAILROAD TERMINAL facilities of Cleveland, O., is to be investigated by the Chamber of Commerce. This organization has retained as expert to survey and report the consulting engineer, Bion J. Arnold.

INDUSTRIAL NEWS

New Iron Prices.

Formal approval has been given by President Wilson to the maximum prices fixed on iron ore, pig-iron, and iron and steel products by the War Industries Board and representatives of the producers. The prices represent an advance of one dollar a ton on pig-iron and 25 cents a ton on ore, and the basing points are made Pittsburgh and Birmingham. No change is made in existing steel prices.

The price-fixing committee of the War Industries Board, Robert S. Brookings, chairman, met with representatives of the steel, pig iron, and iron ore industries to consider price fixing for the quarter beginning October 1 and ending January 1.

Present prices fixed by the price-fixing committee three months ago are: Iron ore, \$5.50 per ton, base lower lake ports; pig iron, \$32 per ton; steel, scrap, \$29 per ton f. o. b. consuming point.

Besides the price-fixing committee the War Industries Board was represented at the conference by J. Leonard Replogle, steel administrator, and Herbert Bayard Swope, associate member of the board and assistant to B. M. Baruch, the chairman.

The official announcement stated that "the maximum prices now prevailing on iron ore, pig iron and steel products be continued in effect for the three months ending on Dec. 31, 1918, with the following exceptions:

"1. Base prices of Lake Superior iron ore delivered at lower Lake ports are increased 25c. per gross ton on and after Oct. 1, 1918, subject to the following conditions: These increased prices are based on the rail freight rate now in effect and on the present Lake rates, and in the event of any increase or decrease in either rail or Lake rate said prices shall be increased or decreased accordingly on all deliveries made during the continuation of such increased or decreased freight rates.

"2. Pig Iron.—The base price on basic iron is increased to \$33, f.o.b. furnace. The base price on No. 2 foundry iron is increased to \$34, f.o.b. furnace. The price of Standard Bessemer iron is fixed at \$35.20 f.o.b. furnace. The above prices are subject to the following changes from previous prices as regards delivery:

"(a) Pig iron produced in the Virginia, Tennessee and Birmingham districts and the scattering districts south of the Ohio and Potomac Rivers and including furnaces at St. Louis, Mo., but not including furnaces bordering on the Ohio River, shall be sold on an f.o.b. Birmingham, Ala., basis.

"(b) Pig iron produced in the Eastern districts; that is, from all blast furnaces located east of the Allegheny Mountains and north of the Potomac River, shall be sold on an f.o.b. Pittsburgh basis.

"(c) Pig iron from all other producing districts or furnaces shall be sold f.o.b. furnace as heretofore.

"No new contracts calling for delivery of any of the above commodities or articles on and after Jan. 1, 1919, are to specify a price unless coupled with a clause making the price subject to revision by any authorized United States Government agency, so that all deliveries after that date shall not exceed the maximum price then in force, although ordered or contracted for in the meantime. It is expected that all manufacturers and producers will observe the maximum prices now fixed."

The new basic pipe prices, with the \$5 increase, are \$60.00 f.o.b. Birming-

ham; \$67.70 f.o.b. New York, and \$66.80 f.o.b. Chicago. Quotations are therefore as follows: Chicago: 4-inch, \$69.80; 6-inch and larger, \$66.80; Class A, \$1 extra. New York: 4-inch, \$70.70; 6-inch and larger, \$67.70; Class A, \$1 extra.

The Portland Cement Association, 111 West Washington street, Chicago, Ill., announces that Capt. J. J. Gailard has assumed the position of district engineer in charge of the Atlanta office of the association, succeeding W. Jess Brown, who has resigned to accept a captaincy in the Ordnance Department.

The National Association of Sand and Gravel Producers, with headquarters at 609 Majestic building, Indianapolis, Ind., has opened an office and information bureau in Washington, D. C., from which bulletins of information relating to the sand and gravel industry will be issued from time to time.

The War Service Committee recently selected to represent the stone, gravel, sand and slag industries held its first meeting in Washington on September 25. Present conditions affecting these industries were discussed and plans were devised for carrying on the work of the committee. The committee is planning a meeting with the Priorities Committee of the War Industries Board in order to determine the proper classification of the industries involved.

The Walter I. Zelnicker Supply Co., St. Louis, Mo., has recently secured the services of Merle G. Peterson, who is now connected with its Chicago sales force at 428 First National Bank Building. Mr. Peterson was formerly associated with the Niles-Bement-Pond Company and Pratt & Whitney Company.

NEWS OF THE SOCIETIES

(Continued from page 275)

Utah; W. D. Simonds, of Phoenix, for Arizona; James Smart, of Calgary, for Alberta, Canada.

At the suggestion of fire chief Charles E. Foster, of Astoria, a committee of three was formed, consisting of himself, assistant chief Samuel H. Short, of Oakland, and chief Joseph Wood, of Renton, Wash., to select a suitable gift for secretary Harry Binghurst, of Seattle, in return for his services as secretary during the past twenty years. It was decided to present him with a memorial medal and a life membership in the association. He began to serve in 1898.

The selection of the next meeting place was left for the executive committee to decide later.

Dixie-Overland Highway Association.

The annual meeting of the Dixie-Overland Highway Association was held recently at Shreveport, La. The meeting was devoted principally to the reception of reports of officers of

the organization and of officers of its various divisions.

Resolutions were adopted by the convention urging federal legislation providing that the Government construct or direct the construction of needed highways, and urging the utilization of alien enemies or other federal prisoners in road construction.

Officers for the coming year were elected as follows: President, Bert K. Smith, Fort Worth, Tex.; general vice president, Sam Howard, Meridian, Miss.; secretary, Leland J. Henderson.

State division vice-presidents were elected as follows: D. M. Dixon, Georgia; M. M. Cassidy, Mississippi; Will Mercer, Louisiana; E. J. Hernan, Texas; Dr. S. M. Johnson, New Mexico; Ed Fletcher, California. The appointment of representatives from Arizona and Alabama was left to the executive committee.

Western Society of Engineers.

The Western Society of Engineers recently held a meeting in Chicago under the auspices of the hydraulic, sanitary and municipal section. William G. Edens, president of the Illinois Highway Improvement Association, spoke on "Good Roads in Illinois." Mr. Edens explained the need for improved highways and the proposed \$60,000,000 bond issue to be voted on Nov. 5. The Illinois centennial photoplay, "Through Illinois Over Unchanged Roads in a World of Change," was shown to the gathering.

PERSONALS

Gruenberg, Frederick P., director of the Bureau of Municipal Research, of Philadelphia, has recently taken a leave of absence to accept an executive position with the Industrial Service Division of the U. S. Bureau of Labor Statistics. His new duties consist largely of organization and direction of office and field forces engaged in research work in the field of industrial relations.

Hinman, Jack J., formerly of the Iowa state board of health, is now a first lieutenant in the sanitary corps of the army. He is assigned to duty abroad.

Hommon, Harry B., formerly sanitary engineer of the U. S. Public Health Service, has been commissioned captain in the sanitary corps of the army and has been assigned to foreign duty.

Rowell, Wesley, for two years city engineer of Albany, N. Y., has accepted a position as government engineer in Virginia.

Whipple, Melville C., instructor in Hygiene and Sanitation at Harvard University, has received a captain's commission in the sanitary corps of the army and has been assigned to foreign duty.

ADVANCE CONTRACT NEWS

ADVANCE INFORMATION BIDS ASKED FOR

CONTRACTS AWARDED ITEMIZED PRICES

To be of value this matter must be printed in the number immediately following its receipt, which makes it impossible for us to verify it all. Our sources of information are believed to be reliable, but we cannot guarantee the correctness of all items. Parties in charge of proposed work are requested to send us information concerning it as early as possible; also correction of any errors discovered.

BIDS ASKED FOR

STATE	CITY	REC'D UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
STREETS AND ROADS.				
O.	Silverton	noon, Oct.	5..Constructing concrete combined curbs and gutters.....	A. M. Wagner, Clk., Room 711, Fourth Nat. Bank Bldg., Cincinnati, O.
W. Va.	Keyser	Oct.	5..Road construction	J. V. Bell, Co. Clk.
Wash.	Colfax	10 a.m., Oct.	7..Road construction	M. W. Fitzsimmons, Co. Engr.
Wash.	Ritzville	2:30 p.m., Oct.	7..Grading, draining and surfacing with gravel or crushed rock about 8.7 ml. of highway.....	F. R. Hewett, Co. Construction Engr.
Miss.	Forest	Oct.	7..Sand-clay road, gravel surface	X. A. Kramer, State Hwy. Commr., Magnolia, Miss.
Kans.	Cottonwood Falls	8 p.m., Oct.	7..Constructing street crossing.....	W. B. Penny, City Clk.
Conn.	New London	Oct.	7..Constructing roads, walks and grading at submarine base	Bureau of Yards & Docks, Navy Dept., Washington
Mass.	Boston	noon, Oct.	7..Paving with granite block.....	Thos. F. Sullivan, Comr. of Public Works.
Mass.	Boston	noon, Oct.	8..Paving with sheet asphalt, Topeka, bitulithic, fibertine, or bitoslag; also with granite block.....	Thos. F. Sullivan, Comr. of Public Works.
O.	Oak Harbor	Oct.	8..Grading, curbing and paving street.....	Rollin Graton, Village Clerk.
Ind.	Bloomfield	2 p.m., Oct.	8..Constructing two macadamized roads.....	George E. Kidd, Co. Aud.
Ind.	Wabash	2 p.m., Oct.	8..Constructing gravel or stone road.....	Frank P. Kircher, Co. Aud.
Fla.	Jacksonville	Oct.	8..Surfacing 25,000 sq. yds. with tarvia and granite.....	County Comrs.
Ind.	Delphi	1:30 p.m., Oct.	8..Constructing two gravel roads.....	H. D. Good, County Aud.
Ind.	Bloomington	2 p.m., Oct.	8..Road construction	Horace Blakely, County Aud.
Pa.	Philadelphia	Oct.	8..Asphalt paving on four streets; furnishing and laying rubble gutters	Fred C. Dunlap, Chief, Bureau of Hwys. City Engr.
Neb.	Omaha	10 a.m., Oct.	8..Street improvement	City Engr.
Wash.	Wenatchee	8 p.m., Oct.	8..Grading and graveling, curbing, gutters, concrete sidewalks, etc.	Geo. Champe, Engr., Nasby Bldg., Toledo, O.
O.	Oak Harbor	10 a.m., Oct.	8..Concrete pavement and concrete curb and gutter.....	X. A. Kramer, State Hwy. Engr., Magnolia, Miss.
Miss.	Decatur	Oct.	9..Sand-clay road, gravel surface	Bd. of Park Commrs.
Ind.	Indianapolis	10:30 a.m., Oct.	10..Constructing cement sidewalks, granitoid curbing, and removing old walk and curbing.....	X. A. Kramer, State Highway Engr., Magnolia, Miss.
Miss.	Tunica	Oct.	10..Sand-clay road with gravel surface.....	H. W. Austin, Purchasing Agt.
Minn.	St. Paul	10:30 a.m., Oct.	14..Repaving alley with vitrified brick.....	Geo. A. Borden, Dir. of Public Service.
O.	Columbus	noon, Oct.	15..Constructing sidewalks on six streets.....	Bureau of Pub. Roads, 403 Hudson Bldg.
Utah	Ogden	2 p.m., Oct.	22..Improving about 6 ml. of national forest road, involving rock and common excavation, concrete, rubble masonry and riprap	
SEWERAGE.				
N. Y.	New York	noon, Oct.	7..Constructing sanitary sewer with necessary appurtenances and outlet sewer.....	C. D. Van Name, Boro. Pres., Richmond, St. George, S. I.
Ia.	Creston	8 p.m., Oct.	7..480 ft. 10-in. and 1,750 ft. 8-in. sewer.....	Theo. S. Declay, City Engr.
Minn.	St. Paul	10:30 a.m., Oct.	7..Constructing sewer	H. W. Austin, City Pch. Agt.
Cal.	San Diego	Oct.	7..Constructing outfall sewer system at Naval Fuel Depot (spec. 3419)	Bureau of Yards and Docks, Navy Dept., Washington, D. C.
Ind.	Mishawaka	11:30 a.m., Oct.	7..Constructing sewer lateral.....	Bd. of Pub. Wks.
Tex.	Houston	2 p.m., Oct.	7..Constructing sewers on four streets.....	E. E. Sands, City Engr.
Minn.	St. Paul	10:30 a.m., Oct.	7..Constructing sewer	H. W. Austin, Purchasing Agt.
O.	Columbus	noon, Oct.	8..Constructing sewers in several alleys.....	Geo. A. Borden, Dir. of Public Service.
Mass.	Boston	noon, Oct.	9..Constructing sewerage works.....	Thos. F. Sullivan, Comr. of Public Works.
N. J.	Newark	9:30 a.m., Oct.	8..Constructing portion of intercepting sewer branch, either by tunnel or open trench method, 48-in. circular brick sewer in case of former and 30 and 36-in. circular concrete sewer in case of latter; constructing superstructure for effluent controlling chamber, with appurtenances; constructing sewer branch section involving excavation for 450 ft. 16-in. cast-iron pipe or 16x24-in. concrete sewer and furnishing and laying 16 tons 16-in. cast-iron pipe	Passaic Valley Sewerage Commission, 31 Clinton St.

BIDS ASKED FOR

STATE	CITY	REC'D UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
Ia., Muscatine	1 p.m., Oct. 8..	Complete steam-driven pumping plant, including one 36-in. and one 24-in. double-suction centrifugal pumps....	Elliott & Harman Eng'g Co., Peoria, Ill.
O., West Park	Oct. 10..	Laying vitrified sewer pipe on four streets, involving about 8,600 ft., 24 brick catch basins and 12 manholes.	Village Clerk.
N. Y., Brooklyn	3 p.m., Oct. 15..	Sewage disposal system on State Hospital.....	E. S. Elwood, Sec. State Hospital Com., Albany, N. Y.
O., Columbus	noon, Oct. 15..	Sewer construction	Geo. A. Borden, Dir. of Public Service.
N. Y., New York	3 p.m., Oct. 15..	Sewage disposal system at Brooklyn State Hospital, Creedmor Division	Lewis F. Pilcher, State Archt., Capitol, Albany.
Ont., Windsor	Oct. 16..	Constructing sewer interceptor for three cities.....	Chas. I. Barker, Secy., Essex Border Utilities Comm.
Ind., LaPorte	10 a.m., Oct. 17..	Water supply equipment for county asylum.....	Fred A. Hausheer, Co. Aud.
Wis., Ashland	10 a.m., Oct. 22..	Constructing 8-in. sanitary sewer.....	W. C. Morris, City Clk.
Pa., Beaver Falls	7 p.m., Oct. 28..	Designing, engineering and other services in connection with extension of present outfall sewer, involving about 1 mile of 24-in. sewer.....	Harry T. Barker, City Engr.
WATER SUPPLY.				
O., Grinnell	2 p.m., Oct. 7..	Constructing 1,000,000-gal. reinforced concrete reservoir and deep well, consisting of 300 ft. 16-in. and 1,700 ft. 8-in. cast iron well casing.....	A. C. Harriman, City Clk.
Ill., Great Lakes	Oct. 7..	Extension to water intake system, to cost about \$125,000 (spec. 3454)	Bureau of Yards and Docks, Navy Dept., Washington, D. C.
Ind., Elkhart	10 a.m., Oct. 11..	Furnishing 3,000 ft. rubber-lined cotton double jacket fire hose, 2½ in., 50 ft. sections.....	M. U. Demarest, Pres. Bd. of Public Works.
LIGHTING AND POWER.				
S. D., Wessington Springs	Oct. 5..	150-hp. engine, direct connected to 60-cycle, 3-phase, 2,300-volt generator, complete with exciter, 100 kw....	E. E. Dykeman, City Aud.
D. C., Washington	2 p.m., Oct. 7..	Three electric motors, a.c., ½ hp., 110 volts, 40 cycles; about 1,200 r.p.m.; 94 rheostates suitable for ½ hp., 110 volt d.c. motors, and 41 rheostats suitable for ½ hp., 220 volt d.c. motors.....	Purchasing Agent, P. O. Dept.
Tex., Petrolia	Oct. 7..	Constructing natural gas pipe line to Fort Worth, to cost about \$250,000 (spec. 3433).....	Bureau of Yards and Docks, Navy Dept., Washington, D. C.
Md., Baltimore	2 p.m., Oct. 7..	Six gasoline-kerosene engines.....	Lighthouse Supt.
Cal., Los Angeles	Oct. 8..	Furnishing and installing a number of high voltage transformers in municipal power plant.....	James B. Vroman, Sec., Dept. of Pub. Serv.
N. C., Belhaven	Oct. 8..	Constructing electric light plant to cost about \$25,000...	City Clerk
Ia., Muscatine	1 p.m., Oct. 8..	Furnishing and erecting complete steam-driven drainage plant; contract in three sections, covering machinery, foundation and building; alternative bid on oil engine-driven plant	Elliott & Harmon Engrg. Co., Peoria, Ill.
Md., Baltimore	11 a.m., Oct. 9..	Installing boiler	C. H. Osborne, Inspector of Buildings.
Mass., Springfield	Oct. 14..	Purchase of three turbines.....	City Clk.
Minn., St. Paul	10:30 a.m., Oct. 14..	Furnishing, installing, equipping, maintaining, lighting, extinguishing, cleaning and keeping in repair incandescent gas lamps and connections with gas mains on certain streets, alleys and public places during the year 1919; also furnishing gas posts.....	H. W. Austin, Purchasing Agt.
Minn., St. Paul	10:30 a.m., Oct. 14..	Lighting streets, parks and other public places with series incandescent gas-filled electric lamps; electrolux street lighting; furnishing current to 500-watt multiple burning type C lamps on underground system; lighting stairways, bridges, etc., with 40-watt multiple incandescent tungsten lamps for 1919 and 1920	H. W. Austin, Purchasing Agt.
D. C., Washington	2 p.m., Oct. 15..	Heating and lighting plant at Cheyenne River School, S. D.	Comr. of Indian Affairs
Wyo., Yellowstone Pk.	2 p.m., Oct. 15..	Constructing road in Yellowstone National Park.....	Geo. E. Goodwin, Civil Engr., Nat. Park Serv., Yellowstone Park
BRIDGES.				
Okla., Perry	Oct. 7..	Constructing bridge consisting of one 50-ft. and two 60-ft. spans, 18-ft. roadway, concrete substructure and floor	H. J. Wilkins, Engr., Majestic Bldg., Oklahoma City, Okla.
Ariz., Holbrook	noon, Oct. 7..	Constructing timber bridge.....	Bd. of County Supervisors.
Ind., Albion	2 p.m., Oct. 7..	Constructing 28-ft. steel bridge and repairing two bridges	Geo. A. Young, Co. Aud.
Ind., Kokomo	11 a.m., Oct. 7..	Bridge construction	Co. Commrs.
Ind., Rensselaer	Oct. 7..	Repairing five bridges, involving new concrete abutments and creosoted wood block floor.....	J. P. Hammond, Co. Aud.
Ind., Greencastle	2 p.m., Oct. 7..	Constructing or repairing two bridges.....	J. M. Allen, Co. Aud.
Cal., Napa	Oct. 8..	Constructing 6-ft. extension to stone arch bridge and three culverts	O. H. Buckman, Co. Surveyor.
Kans., Council Grove	noon, Oct. 8..	60-ft. stone arch bridge with concrete abutments.....	B. F. Cress, Co. Clk.
Pa., Philadelphia	Oct. 8..	Repairing and painting four bridges.....	Fred C. Dunlap, Chief, Bureau of Hwys.
Kans., St. John	noon, Oct. 8..	Constructing one 30-ft., one 20-ft., two 10-ft. and two 8-ft. span concrete slab bridges.....	James Starke, Co. Engr.
Ind., Rochester	10 a.m., Oct. 8..	Repairing bridges	Ernest A. Smith, Co. Aud.
Pa., Scranton	10:30 a.m., Oct. 8..	Constructing two bridges.....	Chas. F. Savage, Co. Controller.
N. J., Egg Harbor	Oct. 9..	Constructing concrete bridge.....	A. H. Nelson, Co. Engr., Guarantee Trust Bldg., Atlantic City.
O., Hamilton	10 a.m., Oct. 9..	Concrete steel box culverts.....	W. W. Crawford, Co. Clerk.
Wash., Okanogan	2 p.m., Oct. 9..	Constructing highway bridge.....	J. D. Hubbard, Clk. Co. Comrs.
Mo., Kansas City	1 p.m., Oct. 9..	Constructing bridge consisting of one 90-ft. steel deck girder vertical lift span, with three 92-ft. reinforced concrete arch spans and 78-ft. concrete girder structure on each side	Waddell & Sons, 800 Graphic Arts Bldg., Kansas City, Mo.

BIDS ASKED FOR

STATE	CITY	REC'D UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
Mo.	Jefferson City	1 p.m., Oct. 9	Constructing reinforced concrete bridge, consisting of one 90-ft. steel deck-girder vertical lift span, flanked on each side by three 92-ft. reinforced concrete arch spans and 78 ft. of concrete girder structure; vertical lift to be of Waddell type and towers of reinforced concrete; span operated by hand power; four contracts covering structural metal, machinery, wire ropes and construction	E. F. Harding, Co. Hwy. Engr. Fred A. Hausheer, Co. Aud. H. W. Austin, Purchasing Agt. J. W. Flenniken, Comr. of Sts. and Pub. Impts. Magwood & Stidwell, Engrs., Cornwall, Ont. City Engr.
Ind.	La Porte	10 a.m., Oct. 10	Bridge repairs	R. W. McKinney, Co. Clk.
Minn.	St. Paul	10:30 a.m., Oct. 14	Taking down and removing superstructure of bridge	
Tenn.	Knoxville	Oct. 14	Constructing viaduct	
Ont.	Finch Township	1 p.m., Oct. 12	Raising bridge	
Tenn.	Knoxville	Oct. 14	Reinforced concrete viaduct	
O.	Springfield	10 a.m., Oct. 14	Bridge repairs involving new abutment and wing walls, straightening stream and back-filling	
Cal.	Los Angeles	noon, Oct. 15	Constructing reinforced concrete diversion dam and bridge on Gila River, Ariz., involving about 31,671 cu. yds. earthwork, 17,235 cu. yds. concrete and placing about 738,362 pounds reinforcing steel and 18 steel gates with operating machinery	W. M. Reed, Chief Engr., U. S. Indian Serv., Dept. of Interior, Washington, D. C. M. J. Flynn, Engr., Mt. Carmel, Pa. Ernest Philip, Co. Clk.
Pa.	Sunbury	Oct. 15	Constructing bridge	
W. Va.	Buchanan	Oct. 16	Repairing bridges and abutment	

MISCELLANEOUS.

O.	Columbus	noon, Oct. 7	Furnishing drag coal conveyor	Geo. A. Borden, Pres., Board of Purchase.
Tenn.	Memphis	Oct. 7	Furnishing and loading about 12,000 cu. yds. riprap stone on government barges	Mississippi River Com., Custom House.
Tenn.	Memphis	11 a.m., Oct. 7	Constructing about 960,000 cu. yds. earthwork	Mississippi River Com., Custom House.
Va.	Norfolk	Oct. 7	Constructing wharf, etc.; also dredging (specification No. 3439)	Bureau of Yards & Docks, Navy Dept., Washington
Pa.	Philadelphia	Oct. 7	Installing automatic sprinkler system (specification No. 3429)	Bureau of Yards & Docks, Navy Dept., Washington
Conn.	New London	Oct. 7	Maintenance dredging in New Haven harbor	U. S. Engr. Office, New London, Conn.
Minn.	Duluth	11 a.m., Oct. 7	Constructing fence around playgrounds	C. R. Magney, Commr. of Pub. Affairs.
N. Y.	Albany	noon, Oct. 8	Four barge canal terminal improvements, as follows: Constructing freight house, heating, and installing plumbing and water supply systems at Erie basin, Buffalo; repairing existing bulkhead and constructing freight house and crane track at East River, N. Y. C.	W. W. Wotherspoon, Supt. of Public Works.
N. J.	Atlantic City	Oct. 10	1½-ton motor truck for water department	L. Van Gilder, Supt. of Water Dept.
O.	Cincinnati	noon, Oct. 10	Electric storage battery locomotive for waterworks department	Ernst von Bargen, City Purchasing Agent
O.	Columbus	noon, Oct. 14	2,800 pounds No. 2 and 9,000 pounds No. 6 triple braid weather-proof copper wire	Geo. A. Borden, Pres., Board of Purchase.
Tex.	Houston	2 p.m., Oct. 14	Constructing 25 tick dipping vats	Will Viser, Co. Clk.
Neb.	Mitchell	Oct. 15	Constructing 12 miles of main lateral, North Platte irrigation project, involving about 167,000 cu. yds. excavation, near Torrington, Wyo.	U. S. Reclamation Service.
D. C.	Washington	Oct. 18	30,000 carbons, medium intensity, for use with 60-in. portable searchlights (Proposal No. 1120)	Gen. Engr. Depot, U. S. A., 1438 U St.
N. Y.	Buffalo	11 a.m., Oct. 28	Dredging and rock excavation	U. S. Engr.
Port Rico	San Juan	10 a.m., Nov. 25	Construction and installation of garbage and refuse incinerator plant	Bur. of Insular Affairs, War Dept., Washington, D. C.

ROADS AND STREETS

Harrisburg, Ark.—Poinsett county rejected all bids received for the sale road district No. 2 bonds, \$50,000; will be re-advertised at a later date.

Little Rock, Ark.—The state counsel of defense has approved priority orders for material for the Arkansas-Louisiana highway, construction on which has been virtually at a standstill because of inability to get material shipped. The road, 150 miles long, will cost more than \$3,000,000.

Los Angeles, Cal.—Supervisor J. S. Dodge has announced he will advocate opening the new county road through Pine canyon, north of Elizabeth lake, as soon as possible. Road will be 25 miles long, extending from the state highway near Sandberg. It is planned not to pave the highway.

Anacostia, D. C.—Bureau Yards and

Docks, Navy Dept., Washington, D. C., receiving bids building concrete road at naval air station.

Washington, D. C.—District commissioner, Dist. Bldg., plans to pave 17th, 23d, B and Virginia Aves, N. W.

Miami, Fla.—Dodge county plans an election in the near future to vote on issuing \$98,000 road bonds.

Atlanta, Ga.—Fulton county commissioners will pave portions of Stewart Ave., Lakewood Ave., and also portion of Pryor St., leading into the fair grounds. Dr. W. L. Gilbert, chairman of public works committee.

Decatur, Ill.—City council passed an ordinance for a 14-ft. concrete sidewalk on the north side of E. Main St., from Franklin St. east to the alley.

Springfield, Ill.—Governor Lowden has issued a statement asking all voters of Illinois to vote "Yes" on the good roads bond issue in November. The Governor urged the \$60,000,000 bond issue as a measure made necessary by the war.

Indianapolis, Ind.—Board of public works adopted resolution for grading and paving sidewalks on 44th St., from Central to Park.

Atchison, Kan.—For about \$18,000 city and Atchison county plans to pave Main St. between 15th and Harmony Garden, including bridge east of Harmony Garden.

Wichita, Kan.—Ordinance approved authorizing the paving, curb and gutter on Green St., from the north line of Douglas Ave. to the south line of 2d St. L. W. Clapp, mayor.

Havre De Grace, Md.—Citizens voted at an election here in favor of issuing \$3,000 street improvement bonds.

Leominster, Mass.—City, by day labor, will build Prospect St., to replace highway closed by military orders in connection with establishment of Camp Devens; about \$20,000; cost will be borne by town, state and Worcester county.

Medford, Mass.—The following bonds were purchased by Curtis & Sanger of Boston: Sidewalk, \$20,000; original equipment, \$15,000; sewer, \$9,000; pavement, \$2,000.

Salem, Mass.—Estabrook & Co. of Boston were the successful bidders for an issue street paving bonds, \$45,000.

Woburn, Mass.—See "Water Supply."
Mt. Clemens, Mich.—Macomb county plans to pave 11 mi. Gratiot Rd. from

Clinton Rd. to Wayne county line, 20 ft. wide, either concrete or brick. W. Lehner, Mt. Clemens, engr.

Woodville, Miss.—Wilkinson county sold to the Silverman-Huyck Co. of Cincinnati road bonds to the amount \$60,000. L. Lewis, chancery clerk.

Helena, Mont.—V. N. Kessler, city clerk, reports council has passed a resolution for the construction of concrete sidewalks, curbs and crosswalks on both sides of Howie St., from Clark St. to Edwards St., et al. Cost, \$2,000.

Platte City, Mo.—Platte county sold to the Park Bank of Parkville, Mo., offered without success Jan. 23, road and bridge bonds, \$20,000, for \$19,400. Emmet Breen, secretary, road commission.

Beatrice, Neb.—For paving Dist. No. 7, city shortly lets contract. Work involves 5,937 sq. yd. paving and 50 lin. ft. curbing, about \$14,373. F. H. Graf, city clerk.

Newark, N. J.—The following ordinance was introduced at a meeting of the board of commissioners Sept. 26 and the final passage will be considered Oct. 17, which provide for the paving of Doremus Ave. (formerly known as Port St.), and for the paving of Wilson Ave., from the westerly line of Ave. L to a point about 600 feet south of Ball's lane with old granite blocks on a sand or cinder foundation. W. J. Egan, city clerk.

Santa Fe, N. Mex.—All bids were rejected Sept. 15 by state highway department for the construction of 15.45 mi. of state road No. 21, Mora county.

New York, N. Y.—The Merchants Association was informed by Charles A. Otis, chief of the resources and conversion section of the war industries board, giving a ruling of the priorities committee, contractors and others engaged in the construction of street pavements and roadways now substantially under way are authorized to continue such construction; manufacturers and distributors of and dealers in material used in connection therewith may work up to Nov. 1. Applications for permits should be made promptly to the United States highway council through the state highway department for the completion of all such work now under contract and under construction which cannot be completed prior to Nov. 1. No new contracts should be entered into for any kind of new work without first obtaining a permit from the federal highways council.

St. George, S. I., N. Y.—Richmond borough plans to repave Vanduzer St. from Richmond Turnpike to Wright St., excepting Hannah to Wave Sts.; also from point 150 ft. south to Broad St. to Vanderbilt Ave., asphalt blocks. C. D. Van Name, pres.; T. S. Oxholm, boro. engr.

Utica, N. Y.—An issue of paving bonds, \$15,000, has been approved by the board of estimate and apportionment.

Clinton, N. C.—Sampson county receiving bids Oct. 14 for an issue \$100,000 road bonds. County attorneys, Butler and Herring.

Bethesda, O.—Village sold to the New First National Bank of Columbus the following bonds: Main St. improvement, \$24,111.43; depot St. improvement, \$3,472.56. O. A. Vancuren, clerk.

Cincinnati, O.—City council, Sept. 17, passed a resolution "Declaring it necessary to improve Haven St. from Forest Ave. to Ehrman Ave., by paving with concrete reinforced."

Oak Harbor, O.—Rollin Gratop, village clerk, taking bids, Oct. 8, for Ottawa street paving bonds, \$8,500.

Rocky River, O.—Village sold, Sept. 17, the following bonds to Sidney Spitzer & Co., of Toledo: West Lake road, \$11,000; North View road, \$10,000; Beach-cliff Blvd., \$63,000. Frank Mitchell, clerk.

Springfield, O.—City Auditor W. J. Barrett will receive bids, Oct. 14, street improvement bonds to the amount \$46,602.

Wooster, O.—Wayne county road bonds, \$11,000, offered without success on May 6, will not be issued, as the issue has been rejected by the Capital Issues Committee. Leroy Smith, clerk, county commissioners.

Pauls Valley, Okla.—Nov. 5 voters will decide on a proposition to issue \$65,000 Walker township road bonds, Garvin county.

Bethlehem, Pa.—See "Sewerage."
Harrisburg, Pa.—The state defense commission voted \$28,000 to the state highway department for improvement of highways and bridges in Western Pennsylvania which are being used by army motor trucks trains moving from manufacturing, assembling and mobilization

points in the middle western states. The work to be done is principally in Beaver county.

Philadelphia, Pa.—Dept. of public works lets contract soon for work valued at approximately \$59,000; characters of work are as indicated. Schedule "A," asphalt paving (assessment work); "B," furnishing and laying rubble gutters; "C," repairing and painting bridges. Fred C. Dunlop, chief of bureau highways.

Scranton, Pa.—Ordinance approved, Sept. 25, authorizing the purchase of real estate for the purpose of extending Kelly Ave., from its present terminus to Mary St. Alex T. Connell, mayor.

Somerset, Pa.—State highway engineers will make a resurvey of the road between the covered bridge, near Holsopple, and Ferrelton on the Lincoln Highway, preliminary to rebuilding the entire eight-mile stretch next summer.

Woodlawn, Pa.—Borough council will receive bids for the erection and construction of a sidewalk and curb on the western side of Hopewell Ave. from the intersection of Hopewell Ave. with Franklin Ave. northwardly to the intersection of Hopewell Ave. with Sheffield Ave., a distance of approximately 900 feet. Plans and specifications with the borough engineer, M. B. Moore.

Pawtucket, R. I.—Board of aldermen received a petition requesting the city to open and improve that portion of Bates St. extending from the northerly line of Benefit St. to the southerly line of North Main St.

Belton, Tex.—Bell county has approved the following road bonds: Series "A," \$16,000; series "F," \$5,100; series "G," \$39,000.

Canton, Tex.—The successful bidder for the following road bonds was Dan La Roe, of Palestine: District No. 2, \$26,666.64; district No. 3, \$100,000; district No. 4, \$100,000. L. Davidson, county judge.

Conroe, Tex.—Montgomery county has sold road district No. 5 bonds, \$42,000, which were offered on Aug. 12 to the county sinking funds. W. M. Williams, county judge.

Huntsville, Tex.—Walker county sold to Weil, Roth & Co., of Cincinnati, road district No. 1 bonds, \$25,000, which were offered on Aug. 22.

Richmond, Va.—Bids rejected for building 5 mi. macadam road between Bethel and Old Tavern, Faquir, Va. G. P. Coleman, state highway commissioner, Richmond.

Seattle, Wash.—Ordinance passed granting permission to the Puget Mill Co. to improve at its own cost and expense Twenty-third Ave. S. W., from W. Genesee St. to Puget Blvd., and certain portions of certain other streets and avenues.

Sedro Woolley, Wash.—Wm. Thomsen, city clerk, reports council has passed a resolution providing for improvement of Metcalf St., between Gibson St. and Murdoch St. et al., by graveling, etc.

Tacoma, Wash.—See "Miscellaneous."

Manitowoc, Wis.—See "Sewerage."

Winnipeg, Man.—The municipal council contemplates the construction of granolithic sidewalks on Bryce St. C. J. Brown, city clerk.

Cundies, Ont.—Council considers road improvements.

Waterloo, Ont.—Town council passed a by-law for the construction of a cement walk on the west side of Herbert St.

Sherbrooke, P. Q.—Hon. J. A. Tessier, provincial minister of roads, Quebec, is considering the construction of a new road between Sherbrooke and Three Rivers.

BIDS RECEIVED AND CONTRACTS AWARDED.

(*Indicates Contracts Awarded.)

Manhattan Beach, Cal.—*R. S. Quarrier, 711 S. Los Angeles St., Los Angeles, Cal., for paving about 13 blocks on Ocean Ave., involving 66,464 sq. ft. of concrete paving, 3,400 lin. ft. cement curb, 2,500 ft. of header and incidental work, at \$18,961.

Martinez, Cal.—O'Brien Brothers, \$28,133, for grading Barry hill from the city limits.

Lake Worth, Fla.—*E. E. W. Bunker and G. F. Bullard, Lake Worth, by city, for repairing and rebuilding streets, about \$80,000.

Muscatine, Ia.—*Fuller Bros. & Co., for concrete paving in Park Ave. to city limits and Weed lane. City council. Mr. Seldon, engineer.

Stouffville, Ia.—C. M. Jensen only bidder on the four and one-half blocks of paving in Morningside.

Chicago Heights, Ill.—Chicago Heights Coal Co., this city, for constructing 3 miles of the Homewood-Lansing road, at \$71,098.

Muncie, Ind.—*Cleo Heatt, this city, and *Oren Broyles, Gaston, Ind., for 1,000 cu. yds. grading, 2,000 cu. yds. gravel, 220 lin. ft. of 12 and 16-in. culverts, two catch basins, at \$3,850 and \$4,289 respectively.

Winthrop, Me.—*E. J. Rourke, Abington, Mass., for 4 mi. highway construction here. State highway commission, Augusta, Me.

Lansing, Mich.—*Chas. Bishop, Hillsdale, Mich., for constructing over 4½ mi. of the Lansing and Eaton Rapids road at \$27,000.

Willmar, Minn.—*Chas. Weaver, Anoka, for excavating division A of project No. 31, state road No. 6, at \$29,423. *Concrete Products Co., Elk River, Minn., for culverts, at \$936.

Brookhaven, Miss.—*Nixon-Smith Construction Co., Montgomery, Ala., for improving 7 mi. federal aid road, 20 ft. wide, gravel surface, at \$33,092. Involves 39,000 cu. yd. grading and 37,000 sq. yd. gravel surfacing, Lincoln county.

Santa Fe, N. Mex.—*Dan LeRoe, Palestine, Tex., was low bidder for constructing 21.8 mi. of state road No. 3, Quay county, involving 35,556 lin. ft. of grader work, at \$102,000.

Perth Amboy, N. J.—*Standard Bitulithic Co., 50 Church St., New York City, at \$34,542, repaving New Brunswick Ave., from Smith St. to Lehigh Valley R. R. City council.

Trenton, N. J.—*Union Paving Co., 30th and Locust Sts., Philadelphia, Pa., for paving Nottingham way, bitulithic concrete on concrete base; about \$48,000. Road freeholders, Mercer county.

Cincinnati, O.—*R. C. Danenhower, Hotel Dennison, Cincinnati, for 18,000 sq. ft. cement walks and 12,800 cu. yds. granite in Eastern Ave.; for cement walks, asphalt paving, curb, gutter, etc., in Freeman Ave. *Henkle & Sullivan Co., Mercantile Library bldg., at \$86,448. Department of public works. C. F. Homberger, director.

Oberlin, O.—*C. E. Williams, Grand Rapids, Mich., at \$9,000, for resurfacing in various streets here. Village council. E. G. Dick, engineer, Oberlin.

Blairsville, Pa.—*L. H. Hileman, New Kensington, Pa., for grading, curbing and paving, at \$23,000, 2,285 sq. yds. concrete. Borough council, Robt. S. Woolf, secretary. C. S. Schwarz, engineer, Blairsville.

Washington, Pa.—*W. Pickett & Co., Washington, building 1.1 mi. shaft road, concrete. Washington county.

Portsmouth, Va.—See "Sewerage."

Hoquiam, Wash.—The *Grays Harbor Construction Co. signed the contract for a gravel roadway on M St., from 2d to 6th St., \$2,700; time for the completion of the work was not stated.

Seattle, Wash.—Superior Const. Co., \$21,518; Puget Sound B. & D. Co., Central Bldg., \$19,127.10, bidders for grading and water mains on Twenty-sixth Ave. S. W. Board of public works.

Seattle, Wash.—See "Streets and Roads."

Denmark, Wis.—*Ed Shoester, Denmark, for building Manitowoc road, \$13,000; 1½ mi. concrete. Geo. J. Cornier, Brown county commissioner, Court House, Green Bay, Wis.

New Westminster, B. C.—*Harrison & Lamond, of Vancouver, for the hard surfacing of a portion of No. 3 road on Lulu Island, between Eburne and Woodward's Landing, by the public works department.

Burnaby, B. C.—*Cotton & Co., for resurfacing roads, at \$20,000.

Port Colborne, Ont.—*P. Beam and W. Able, Kent St., for construction of sidewalks and roadways.

Blenville, Que.—*Therien & Guay, for construction of a macadam road costing \$4,000. Town council.

SEWERAGE AND SANITATION

Seal Beach, Cal.—See "Water Supply."

Coeur D'Alene, Ida.—Geo. H. Freeland, city clerk, reports the council has passed an ordinance providing for the construction of a sewer in district No. 1.

Moline, Ill.—See "Water Supply."

Oakdale, La.—City will build a sanitary sewerage system; about \$30,000.

Medford, Mass.—See "Streets and Roads."

Woburn, Mass.—See "Water Supply."
Hamtramck, Mich.—Village has sold an issue sewer bonds, \$129,298.40, to Matthew Finn of Detroit. J. C. Schulteis, clerk.

Lansing, Mich.—City council adopted the following resolution, Sept. 23, to construct 232 feet of sewer in Cedar St. and Mt. Hope Ave., from sewer in Cedar St. to Mt. Hope Ave., and in Mt. Hope Ave. east 132 feet in the sewer and drain district. Judson A. Parsons, city clerk.

Shakopee, Minn.—From women's reformatory to river, sewer system contemplated. D. F. Mullen, secretary state board of control, State House, St. Paul. C. L. Pillsbury, 805 Met. Life Bldg., Minneapolis, Minn.

Norwich, N. Y.—Engineer C. R. Davis, City Hall, drawing plans sewage disposal plant. Linn. D. Babcock, mayor.

East Liverpool, O.—See "Streets and Roads."

Saratoga Springs, N. Y.—City will have plans prepared at once and bids asked for the construction of a new sewer in Fifth Ave. which will be six inches in diameter.

Syracuse, N. Y.—City Engineer Henry C. Allen has completed all arrangements preparatory to letting the contract for the sewer in the 17th ward, which is to be built to serve Buckingham, La Salle, Westcott (south end), Roosevelt, Miles, Westmoreland, Fellows, Lenox, Strong and Broad St. and Kensington road. As soon as the work has been advertised the contract will be let and work will begin this fall.

Youngstown, O.—There were no bids received for the following bonds: Sewer repair, \$7,500; fire department, \$10,800; Overland St. improvement, \$25,125. J. R. Edwards, city auditor.

Bethlehem, Pa.—City council approved plans and specifications submitted by Engineer Fox for the 5th St. sewer, between Elm and Locust Sts., south side and the paving of 2d St., between New and Pine Sts. Mayor Johnston.

Dormont, Pa.—An ordinance has been passed providing for an election, Nov. 5, to vote on issuing \$70,000 sewage disposal plant and funding bonds.

Scranton, Pa.—Ordinance approved Sept. 25 for construction sewer in Oakford court and Walnut St., in the 13th ward. Alex T. Connell, mayor.

Pawtucket, R. I.—The following joint resolution was passed making appropriation of \$5,000 for sewer construction.

Austin, Tex.—As a result of the conference held with Attorney General Looney and representatives of the city of Dallas, Fort Worth and the packing houses at Fort Worth, regarding the pollution of the Trinity river, an understanding was reached whereby a suitable sewage disposal plant is to be erected at Fort Worth to take care of the sewage so as to prevent the contamination of the river. It developed that Fort Worth had already employed an engineer who is now at work on plans, and will, in the opinion of D. V. Odell, who represented that city, be ready to report within a short time.

Tacoma, Wash.—See "Miscellaneous."

Manitowoc, Wis.—City council voted the following appropriations for improvements: \$50,000 for the sewer mains in the Riverview district, to be occupied by about 100 homes for shipworkers; \$35,200 for domestic and storm sewers; water extension, fire protection and surface drainage, \$19,400; lighting service, \$7,000, and \$27,000 for street improvements and paving.

Moorecroft, Wyo.—Keeler Bros. of Denver were the successful bidders for an issue \$8,000 sewer bonds offered Aug. 31. D. R. Shackelford, town clerk.

Ottawa, Ont.—For reinforcing and cement in connection with pipe for a \$30,000 intercepting sewer. B. Blair & Co., Ltd., 23 Butterworth Bldg., are in the market.

Ottawa, Ont.—City council plans to construct a 9-in. tile pipe sewer in Carling Ave., at an estimated cost of \$3,308.80; also a 9-in. tile pipe sewer in Hawthorne Ave., at an estimated cost of \$662.20. Norman H. H. Lett, city clerk.

Preston, Ont.—Board of works will soon call for bids for construction of an 8-in. sewer. Deputy Reeve Wiemer, chairman.

BIDS RECEIVED AND CONTRACTS AWARDED.

(*Indicates Contracts Awarded.)

Tusculum, Ala.—*Speed & Kearney, of Memphis, for a complete sewer system; about 13 mi; cost of approximately \$175,000.

Paragould, Ark.—*A. G. Kress, Little Rock, Ark., for installing sewer. H. Q. Donaldson secretary, city council. W. B. Rollins & Co., engineers, 209 Ry. Ex. bldg., Kansas City, Mo.

Davenport, Ia.—*Keeler & Co., for the construction of sewers for war cottages; 6½ mi. of sewers; cost, \$47,183; vitrified pipe will be used.

Sioux City, Ia.—J. F. Delvin, Ward & Wightman, Cady & Savonell, F. T. Leeder and W. B. Carter bidders for the sewer in the Levitt heights.

Waterloo, Ia.—*Dearborn Construction Co., for \$8,300, for the construction of 3,300 ft. of 10 and 12-in. vitrified sewer on Sycamore St., Linwood and Rock Island Aves.

Boston, Mass.—*T. J. O'Connell, 112 Water St., for catch basins, etc., in N. Harvard and Kendrick Sts. Dept. of public works. Thomas F. Sullivan, commissioner, 511 City Hall annex.

Boston, Mass.—*W. M. Barrett & Co., 35 Wendell St., Boston, building sewers in Rutherford Ave., from Chapman to Cambridge Sts., Charlestown dist., \$48,419 for all concrete and \$48,120 for concrete and segment block arch sewer. Work involves approximately 434 lin. ft. 20 and 24 in. D. S. pipe sewer, 612 lin. ft. 6-ft. 6-in. circular concrete sewer, 1,218 lin. ft. 2-6-ft. concrete or segment block sewer, 350 cu. yd. earth excav., 50 cu. yd. rock excav., lumber, etc. Board public works.

Quincy, Mass.—*Dennis F. Crowley, at \$161,523, for building sewers in Avalo, Lawa and Whiton Aves., Dee Rd. and Ruggles St. Work involves 25,500 sq. yd. bituminous macadam, 45,000 gal. bituminous material, 88,000 sq. ft. granolithic sidewalks, 2,400 lin. ft. curved and 200 lin. ft. straight granite curbing, 2,600 lin. ft. concrete curbing, 27,500 cu. yd. earth excav., 300 cu. yd. rock excav., 280 cu. yd. brick and 10 cu. yd. concrete masonry, 17,325 lin. ft. 8-18 in. sewer and drain pipe, etc. Comr. pub. works.

Fairmount, Minn.—*J. W. Turner Imp. Co., Des Moines, Ia., and *F. D. Gould, Fairmount, for constructing sewerage system involving 6,800 ft. 18-in. pipe with appurtenances, and disposal plant, at \$49,812 and \$17,920 respectively.

St. Cloud, Minn.—*Joe P. Munsinger, 127 Fifth Ave. S., St. Cloud, Minn., for sewer. A. W. Buckman, city clerk.

Kansas City, Mo.—*Kinler Construction Co., 3426 Michigan Ave., this city, for constructing sewers in city at \$51,390.

Taconite, Minn.—*A. A. Mitchell, Coleraine, Minn., for constructing and installing sewer system, including disposal plant.

Trenton, N. J.—*G. Boscarelli & Jos. Jingoli, 26 Middle Rice St., at \$3,500, for sewer in Franklin St. City council. A. Swan, engineer, City Hall.

New York, N. Y.—*Masterson Construction Corp., 706 W. 180th St., at \$17,970, for installing sewers for new and proposed buildings on Randall's Island. B. S. Coler, comr. dept. pub. charities.

Fayetteville, N. C.—*Porter & Boyd, this city, for constructing sewer system at Camp Bragg, at about \$1,000,000.

Canton, O.—*D. Niekles, for installing sanitary sewers in 17th St., N. W., from Fulton Rd., N. W., to Walden Ave., N. W.; *M. Sturretti, in 13th St., N. E., from Superior Ave., N. E., to Grace Ave., N. E., both contractors of Canton. Board pub. serv.

Portsmouth, Va.—*Central Engrg. Co., Lee and Dickinson Sts., Charleston, W. Va., for building sewers, water works, paving streets, etc., in connection with housing facilities project. Cost, between \$500,000 and \$800,000. Industrial housing comm., Washington, D. C.

Richmond, Va.—*W. E. Carter, sewer, Midlothia turnpike, near Franklin School. C. E. Bolling, city engineer, City Hall.

Vancouver, Wash.—The *Jacobson-Jensen Co., of Portland, for the construction of the sewer from 19th to 26th St. in the alley between H and I Sts.; \$3,640.95.

Beloit, Wis.—*Logan & Glertz, Elgin, Ill., for constructing a storm sewer in the 5th ward, involving approximately 3,593 ft. of pipe sewer, 12 to 18 inches, at \$6,710.

Kenosha, Wis.—*Ostergard & Ostergard, Kenosha, for sewer, 1 manhole, 300 ft. 12-in. vitrified tile sewer, West St., from Park to Market.

Racine, Wis.—*E. R. Harding Co., Racine, \$1.48; manholes, \$50; 825 lin. ft. 8-in. sewer, 2 manholes.

Waukesha, Wis.—*Frank P. Cogel, Waukesha, for sewer on Adams St., \$522. Engr., Wm. Powrie.

WATER SUPPLY

Florence, Ala.—City sold water extension bonds, \$75,000, to Sidney Spitzer & Co., of Toledo. M. M. Striplin, mayor.

Phoenix, Ariz.—City receiving bids Oct. 23 for the purchase of \$100,000 bonds, proceeds to be used for the purpose of acquiring additional pumping plants to supply city with water. Frank Thomas, city clerk.

Seal Beach, Cal.—City will receive bids at any time for the following bonds offered on Dec. 20, 1917: Waterworks, \$45,000; sewer, \$45,000. A. Dyson, city clerk.

Clinton, Ia.—Contract soon let by city for improving water works system. C. Brossman, engr.

Luverne, Ia.—This town has sold \$6,000 water works bonds offered on June 4. W. H. Raney, town clerk.

Great Lakes, Ill.—U. S. Govt., C. W. Parks, chief bureau of yards and docks, navy department, Washington, D. C., plans drawn water intake system extension, \$125,000.

Moline, Ill.—City had plans drawn for water mains and sewers on 15th St. from 27th to 28th. Lisle Paten, city hall, engr.

Ellis, Kan.—D. E. Dunne & Co., of Wichita, were the successful bidders for an issue water and electric light bonds, \$30,000. R. T. Payne, city clerk.

Fort Scott, Kan.—A proposition to issue \$150,000 municipal water plant bonds will be submitted to the voters at an early election.

Cambridge, Mass.—For waterproofing interior of Payson Park Reservoir, city has appropriated \$100,000.

Haverhill, Mass.—Water Commissioners will install a 200-H.P. electric pump at station at Johnson's Pond, the Selectmen having been authorized to grant pole locations at special town meeting in Groveland.

Salem, Mass.—Estabrook & Co., of Boston, were the successful bidders for an issue water bonds, \$22,000.

Springfield, Mass.—New bids are called by council for Oct. 14 for the sale of the unused equipment at the municipal electric light plant.

Woburn, Mass.—The following bonds purchased by Curtis & Sanger, of Boston: Water mains, \$1,675; sewer and pavement, \$17,200; water, \$3,500.

Roy, N. Mex.—Otis & Co., of Cleveland, were the successful bidders, Sept. 11, for waterworks bonds, \$45,000. O. W. Hearn, village treasurer.

Detroit, Mich.—For furnishing 95 tons special castings for connection for pipe 32 to 48 in. in size, 250 tons of connections up to and including 24-in., well curves, gate boxes, etc., city will shortly let contract, about \$30,000. G. H. Fennell, Jefferson Ave. and Randolph St., engr.

Wyandotte, Mich.—Citizens at special election voted in favor of issuing \$280,000 filtration plant bonds.

Palmer, Neb.—Water and light bonds, \$43,635, offered on Aug. 25 have been sold to the state of Nebraska.

Bethany, Mo.—For improvement to water works and dam, city had plans prepared, about \$10,000. M. G. Hall, Centerville, Ia., engr.

Columbus, Mont.—City voted in favor of issuing \$19,000 water works refunding bonds. L. Doane Dixon, mayor.

Rockaway, L. I., N. Y.—Bureau Yards and Docks, Navy Dept., Washington, D. C., drawing plans for water system extension; \$15,000. C. W. Parks, Chief.

Evans Mills, N. Y.—Village contemplates water works; \$75,000. City Engr., G. C. Hill, City Hall, Fulton, N. Y.

Honeoye Falls, N. Y.—Water extension bonds to the amount \$1,800 purchased by F. Druschel, of Honeoye Falls. A. B. Neal, village clerk.

Nassau, N. Y.—John L. Barne, of Nassau, purchased an issue water improvement bonds to the amount \$3,900. James W. Becker, village clerk.

Warsaw, N. C.—See "Lighting and Power."

Hamilton, O.—Ernst E. Erb, auditor, receiving bids Oct. 22 for an issue \$50,000 waterworks bonds.

Norwood, O.—City contemplates water softening system, \$50,000, at waterworks plant. Allen Kissenger, City Hall, Engr.

Fairmont, Okla.—City has selected site for \$20,000 filtration plant. Frank Jones, Engr.

Salem, O.—Ordinance passed by city council authorizing the issuance \$20,000 waterworks improvement bonds.

Sebring, O.—Village voted Aug. 31 in favor of issuing \$96,000 waterworks bonds. Harry Jenkins, village clerk.

Woodsheld, O.—A proposition will be before the village voters Nov. 5 on issuing water bonds. \$65,000.

Guthrie, Okla.—City voted Sept. 16 in favor of issuing \$250,000 waterworks bonds. Geo. L. Anderson, city clerk.

Stonewall, Okla.—Ordinance authorizing the sale of \$10,000 water extension bonds was passed by town trustees.

Vale, Ore.—Application has been made to State Engr. Lewis by city for appropriation of $\frac{1}{4}$ cu. ft. water per second from Willow Spring and Sand Hollow for municipal water supply. Estimated cost of proposed improvement, \$12,000.

Middleburg, Pa.—For about \$50,000, borough council voted to purchase plant of Middleburg Water Co. Extensions and improvements are considered.

Pierre, S. D.—City taking bids waterworks, municipal electric light plant (improvements), concrete reservoir, 750,000 gal. cap. A. Bruner, supt. Pierre Henningson, engr., Co. Omaha, Neb., consulting engr.

Stamford, Tex.—R. M. Grant & Co., of Chicago, has purchased \$240,000 worth at par of the \$440,000 waterworks bonds recently voted. W. B. Johnson, city secretary.

Childress, Tex.—City has postponed until after the war the proposed issue of water works bonds, \$400,000. City attorney, I. H. Aynesworth.

Seattle, Wash.—Board of public works rejected bids laying water mains on Eleventh Ave. S. W.

Tacoma, Wash.—The city commissioners have instructed City Attorney Harmon to draw up ordinances providing for two water mains, one on Fawcett Ave. from 40th to 48th Sts., the other at 52nd and McKinley to E. N. St.

Charleston, W. Va.—Bureau Yards and Docks, Navy Dept., Washington, D. C., has plans drawn for tanks and pumping plant and water supply. C. W. Parks, Chief.

Clarksburg, W. Va.—City is considering the issuance of \$100,000 water works bonds.

Manitowoc, Wis.—See "Sewerage."

Janesville, Wis.—City will shortly start work on water main extensions. C. J. Kerch, Engr.

Montreal South, Que.—An additional \$50,000 has been voted to complete the water and drainage works undertaken by the town.

BIDS RECEIVED AND CONTRACTS AWARDED.

(*Indicates Contracts Awarded.)

Cherry Lake, Ill.—*Jos. E. Nelson & Son, 118 N. La Salle St., Chicago, general contract for enlarging earth reservoir and new earth dam, new pump house, concrete spillway and corewalk, Cherry Lake near Duquoin. Architect and Engr., F. R. Judd, care Illinois Central RR.; A. D. Baldwin, Chief Engr., 135 E. 11th Pl., Chicago.

Des Plaines, Ill.—*F. F. Gray, 14 E. Jackson Blvd., Chicago, for digging a deep well and pumping equipment for the Benjamin Elec. Mfg. Co., Des Plaines.

Elmhurst, Ill.—*F. M. Gray, Jr., 305 M. E. M. Bank bldg., Milwaukee, about \$12,000 for drilling well at Elmhurst. City Council. W. M. Hammerschmidt, mayor; Edwin Hancock, engr., 2047 Ogden ave., Chicago.

Baltimore, Md.—*Price Construction Co., Maryland Trust bldg., for water pipe line in Keys highway. City council. Jas. E. Preston, mayor, city hall.

Dayton, O.—*E. D. Murray, lowest bidder for the repaving of the spaces that were torn up, to construct water mains to the high pressure reservoir. These lines extended along Brown St., from Wyoming St. S. and Warren St., from Jefferson St. S. City commission.

Boston, Mass.—*Martino De Matteo, for laying about 300 lin. ft. service pipe trench. Contract covers laying and relaying water pipes in Devonshire, Richmond; North and Friend Sts., city proper; W. 1st St., South Boston; Mt. Warren, Roxbury; Delano St., Salisbury; Greenwood and Cottage Parks, Dorchester. \$5,895. Board of Pub. Works.

Virginia, Minn.—*B. T. Sturdevant Company, Boston, economizers, at \$8,200; boiler feed pumps, Rich-Raley Company, Duluth, \$4,782; vacuum pump, Rich-Raley Company, \$1,839; feed water heater, *R. B. Whiteacre Company, St. Paul, \$2,760; breeching, to the same company, \$1,181; receiver, William Bros. Boiler &

Manufacturing Company, \$580. The water and light commission awarded contracts for the boiler equipment in the new heating plant.

Gloucester, N. J.—*MacArthur Bros., 120 Broadway, N. Y. City, and 1421 Chestnut St., Philadelphia, for water mains, \$36,000, by Emergency Fleet Corp., care A. Merritt Taylor, 253 N. Broad St., Philadelphia, Pa. Remington & Vobury, 6th and Market Sts., engr.

Kearney, N. J.—*Jaehnig & Peoples, Inc., 221 13th St., Newark, N. J., for laying 12-in. water main under Lincoln Highway in connection with the construction of the plant by Ford Motor Co., at \$13,000.

New York, N. Y.—*McAvoy and D. Stefano, 313 E. 127th St., New York City, at \$34,524, for hauling and laying water mains and appurtenances in Cornell, Fairview, Forest, Franklin, Haugwout, Heberton, Hillside, Mundy, Seaview, Van Wyk and Winan Aves., Beach, Collet, Dale, Egbert, McHugh, Paris, Sand, 2d and 3d Sts., Marscher Pl. and York Terrace. C. D. Van Name, pres. Richmond boro.

Akron, O.—*Bingham & Taylor, Chicago, Ill., for furnishing 800 valve boxes and 100 extensions at \$5,001 for water works improvements.

Ironton, O.—*The Schwickart Lumber Co., of this city, at \$15,900 for the new pumping station at the city waterworks, brick.

Sandusky, O.—*Jos. L. Skellen Engineering Co., Toledo, for furnishing new boilers for the water works powerhouse, at \$21,493.

Stillwater, Okla.—*Gudgel & McVey, Stillwater, for laying 18,000 ft. pipe, about 33.5 cts. for earth and \$2.50 for rock excav.

Liberty, S. C.—*J. B. McCrary Co., 3d National Bank bldg., Atlanta, Ga., for building waterworks system.

Grafton, S. D.—*J. M. Carroll, Grand Forks, N. D., for building extensions to water mains in district Nos. 2 and 3, at \$9,326. J. H. Johnson, city auditor.

Portsmouth, Va.—See "Sewerage."

Seattle, Wash.—Joe De Julio, \$10,430.50; Florito Bros., \$9,063; J. Erickson, \$8,697.50, bidders, water mains on Sixtieth Ave. S. W. Board of public works.

Pashtigo, Wis.—*Jorgenson Construction Co., Denmark, Wis., for constructing dam for the Oconto Service Co., at \$25,000.

St. John, N. B.—*Vroom & Arnold, B. N. A. Bldg., St. John, representing Canada Iron Foundry, for 16-in. pipe for water main, costing \$65,000, let by city council.

Woodstock, Ont.—*Geo. Wilkes, for relining the reservoir with a cement wall. Board of water and light commissioners.

Pointe Claire, Que.—*Fraser & Chalmers, of Canada, Ltd., of Montreal, Que., by the corporation of the town of Pointe Claire, Pointe Claire, Que., for a 1,500-gallon centrifugal pump, direct connected to a Sterling gasoline engine.

LIGHTING AND POWER

Mobile, Ala.—Mobile Electric Co. will improve its power plant and transmission system at cost of \$50,000.

Washington, D. C.—To meet the demands for power in Delaware River ship building districts, a monster power project has been planned by Philadelphia interests, in conjunction with the United States Shipping Board, it was reported here. The plant, it was said, would entail expenditure of approximately \$14,500,000. The Shipping Board, it was said, will advance about \$6,500,000 of the plant's cost. In return, it will be given priority in power. Application has been made to the Capital Issues Committee by Philadelphia interests for authority to issue stock covering the \$18,000,000 which they will supply.

Washington, D. C. (Bureau of Foreign and Domestic Commerce, Department of Commerce)—A lighting and engineering concern in Australia wishes to be placed in communication with American manufacturers of various forms of air gas and petrol lighting; also electric lighting apparatus for country homes. Refer to opportunity No. 27507.

Frankfort, Ind.—City sold electric light bonds, \$50,000, to Fletcher American National Bank, of Indianapolis. T. S. Coble, City Clk.

Ellis, Kan.—See "Water Supply."

Palmer, Neb.—See "Water Supply."

Weehawken, N. J.—Weehawken Tugsten Lamp Co., 340 Hudson St., has had plans prepared for the construction of a new two-story plant on Gregory Ave., about 50 by 80 ft., to cost \$10,000.

Watertown, N. Y.—The city has completed plans for its proposed municipal electric plant, to cost about \$300,000. The station will be located about $1\frac{1}{2}$ miles from the city limits, and will include transmission and distributing system. Thomas L. Tomlines, City Bank Building, Syracuse, is engineer.

Warsaw, N. C.—This town will take bids Oct. 7 for electric light and water bond; \$12,000. Town clerk and treasurer, H. F. Pierce.

Altoona, Pa.—The Pennsylvania Railroad will spend \$2,000,000 in establishing a central electric power plant and in extensions in the Juniata shops to increase the output of locomotives. Materials and equipment have been ordered and work will begin at once.

Bethlehem, Pa.—City manager was directed to secure a bid on municipal lighting for the North and West Sides not to exceed a 10-year period. Mayor Johnston.

Hooverville, Pa.—Borough plans to issue light, heat and power plant bonds.

Pierre, S. D.—See "Water Supply."

Manitowoc, Wis.—See "Sewerage."

Milwaukee, Wis.—Funds to the amount of something over \$200,000 are now available for carrying on of the work of the extension of the municipal lighting plant. The bonds authorized by the Capital Issues Committee for this purpose were sold, the purchasers the First National bank, the Wisconsin Trust Company, the Marshal & Illsley bank and the Second Ward Savings bank.

Fergus, Ont.—A new transformer to replace one destroyed by storm will be purchased by town council.

Rosthern, Sask.—Water commissioners plan to install additional electrical equipment at power house for lighting purposes. Chairman, Mayor Fleury.

FIRE

Jerome, Ariz.—See "Miscellaneous."

Pelham Manor, N. Y.—H. A. Kahler & Co., of New York, were the successful bidders for fire engine bonds, \$7,000, offered on April 23. H. E. Burnett, village clerk.

Underwood, N. D.—Village sold to the Minnesota Loan & Trust Co., of Minneapolis, fire hall bonds; \$5,000. Calix F. Bawer, village clerk.

Mansfield, O.—The fire department bonds to the amount of \$35,000 were purchased by the Mansfield Savings Bank. C. H. Rhoades, city auditor.

Johnstown, Pa.—Council passed finally two ordinances, one appropriating funds for the repair of city buildings and additional appropriations for maintenance and supplies for the fire department.

Tacoma, Wash.—See "Miscellaneous."

BIDS RECEIVED AND CONTRACTS AWARDED.

(*Indicates Contracts Awarded.)

Fort Worth, Tex.—*American La France Fire Engine Co., of Elmira, N. Y., equipment includes two six-cylinder, 105 horsepower combination pumping engines and hose wagons; two four-cylinder, 75 horsepower combination pumping engines and hose carts; two four-cylinder, 75 horsepower combination hose and chemical carts; one four-cylinder 75 horsepower aerial truck, and one four-cylinder, 75 horsepower aerial truck, and one four-cylinder, 75 horsepower service truck with hose body and chemical truck.

BRIDGES

Fort Smith, Ark.—Sebastian county has applied to the Capital Issues Committee for approval of an issue of \$500,000 bridge bonds.

Nevada City, Cal.—A reinforced concrete bridge to cost about \$10,000 is to be constructed over South Wolf creek

in Nevada county by the supervisors under the emergency act which allows supervisors to rush construction work when an emergency exists. This bridge will have three 40-ft. spans. The design is furnished by Solon Pearce, a Sacramento engineer.

Davenport, Ia.—On the ground that the structure is a vital necessity, city officials will soon begin a campaign to secure priority orders for material to erect a new bridge over Duck creek on North Brady St. The matter was taken up by City Attorney Frank Betty and City Engineer Roscoe E. Sawtowsky with the Iowa highway commission during the recent convention of the League of Iowa Municipalities at Ames. At that time no satisfactory understanding was arrived at.

Manhattan, Kan.—Riley County rejected all bids for building two reinforced concrete bridges; will probably build by day labor. O. E. Noble, Engr.; H. R. Yenawine, Clk.

Winfield, Kan.—For building bridge at 9th St., Winfield, and for bridge at Country Club, Arkansas City, Kan., Cowley County rejected bids. Harrington, Howard & Ash, Engrs., Orear-Leslie Bldg., Kansas City, Mo.

Springfield, Mass.—County Comrs. have approved of proposed repairs to old toll bridge at conference between Supervisors and West Springfield Selectmen at which Engr. J. B. Snow, of Boston, presented preliminary drawings of plan of repairs. Mayor Stacy was instructed to immediately obtain Federal Government permission. Mayor emphasizes fact repairs will be merely temporary, to provide bridge facilities in interim until new bridge is built. When work is completed, old toll bridge will be anomalous spectacle. Three central spans will be replaced by structure of wooden lattice work without roof, while rest of bridge will be left as now, only most necessary repairs to be made. It is estimated that 225,000 ft. timber will be used and that total cost of project will be in excess of \$75,000. Probable that cost-plus plan will be adopted in awarding contracts.

Pine City, Minn.—Plans drawn for building bridge over Pokegama Creek. Specifications by State Highway Comm., 920 Guardian Life Bldg., St. Paul, Minn., W. K. Buckley, Assoc. Engr.

Preston, Minn.—Plans drawn for erecting 20-ft. span bridge No. 2984. Rushford township; asso. engr, Mr. Dunbar, Preston, J. Dunford and Tillmore county.

Stewartville, Minn.—State lighting comsn., Guardian Life bldg., St. Paul, bridge No. 2915 contemplated Summer township. A. E. Doten, town clerk, Summer township, via Stewartville.

Sumner, Miss.—Tallahatchie county, clerk board of supervisors D. S. Henderson will receive bids until Oct. 7; bridge bonds; \$25,000.

Platte City, Mo.—See "Streets and Roads."

Great Falls, Mont.—Bids were opened here for the construction of two concrete bridges across the Missouri River in Great Falls, one at First Ave. N. and at Tenth Ave. N. The estimate of the county engineer as to the cost of the structures was \$467,000. Inasmuch as the bids ran far above the estimate all were rejected.

Wilkesboro, N. C.—Bruce Craven, of Trinity has purchased \$22,000 worth of bridge bonds offered by Wilkes county. W. H. Foster, county clerk.

Bryan, O.—Bridge bonds to the amount \$40,000 offered by Williams county purchased by the state industrial commission. C. R. Lowe, county auditor.

Harrisburg, Pa.—County Comrs. rejected bids received to construct new bridge over Fishing Creek, in Fishing Creek Valley, 3 miles east of Fort Hunter, after receiving communication from Highways Council in Washington forbidding construction of bridge in war times.

Harrisburg, Pa.—See "Streets and Roads."

Philadelphia, Pa.—See "Streets and Roads."

Concepcion, Wash.—Board of commissioners of Okanogan county soon lets contract for the construction of a highway bridge over the Okanogan River at Pine St. in the town of Okanogan. The bridge will consist of three 84-ft. Howe truss spans on concrete piers and abutments. The bridge roadway width will be 18 ft. with one 5-ft. walk. Horace A. Smith, county engineer, planned the proposed structure.

Tacoma, Wash.—See "Miscellaneous."
Janesville, Wis.—City had plans drawn for bridge, Jackson St.; will take bids about Nov. 15; 349 ft. long. C. V. Kerch, care J. B. Warthington, city clerk.

Koshkonong, Wis.—Plans drawn for bridge. A. P. Hirst, Wisconsin road and bridge commissioners. M. W. Torkelson, Madison, engineer.

Madison, Wis.—For building a concrete bridge over Starkweather creek on Milwaukee St. at \$3,700; plans approved.

Star Prairie, Wis.—Engr. M. W. Torkelson, Madison, plans drawn for a reinforced concrete bridge. A. P. Hirst, Wisconsin road and bridge commissioners.

Townsend, Wis.—County highway commissioners, Oconto, now taking bids for bridge; \$5,200. M. W. Torkelson, Madison, engineer.

BIDS RECEIVED AND CONTRACTS AWARDED.

(*Indicates Contracts Awarded.)

Marysville, Cal.—*F. H. Neilson, of Orland, and D. C. Hogue, of this city, for a bridge over Oregon House creek on the Marysville-Camptown mail route, at \$5,846, and for a protecting wall near Nigger Jack slough on the Marysville-LaPorter road, at \$1,800. Yuba county board of supervisors.

Decatur, Ill.—*Fred Fluss, Oreona, Ill., by Macon County Council for reinforced concrete bridge east of Oakley, Ill.

Garnett, Kan.—*Midland Bridge Co., Kansas City, Mo., and Earl Stein, Westphalia, Kan., for building reface concrete bridges and culverts; Anderson county. L. McNary, clerk.

Hill City, Kan.—*J. W. Graves, Norton, Kan., for reinforced concrete bridge over Solomon River at Hill City. Chas. F. Miller, engr., Hill City.

Boston, Mass.—*Daddario & Booth, for building additions to abutments of Norfolk St. bridge, Dorchester; \$5,400. Board Pub. Works.

Faribault, Minn.—*R. R. Thomas, Faribault, for bridge No. 2975 in Northfield township, 18 ft. slab span; Rice county. F. M. Kaiserat, auditor, Faribault.

Luverne, Minn.—*P. N. Gillman, Luverne, for building bridge in town of Mound. O. S. Anderson, clerk, town of Mound, via Luverne.

Stephen, Minn.—*Valley Constr. Co., Warren, for steel and concrete bridge across Tamarack river, \$2,975.

Columbus, Mo.—*Kansas City Bridge Constr. Co., Kansas City, Mo., for building bridge over Gerapin River, Columbia; steel, concrete abutments. Boone county.

Lima, O.—*Mullen & Blodgett, Lima, at \$38,047 for building bridge at Elizabeth St. City council; V. C. Miller, engr., city hall.

Brightwood, Pa.—*Edw. A. Wehr, Hiland Bldg., Pittsburgh, on percentage basis, concrete arch extension, by P. & L. E. RR. Co., J. A. Atwood, Chief Engr., P. & L. E. Station, Pittsburgh, Pa.

Clearfield, Pa.—*Winniker and Deal, Harrisburg, Pa., for bridge at Turnpike road; re-conc. 72 ft. Clearfield county comrs. G. A. Fleak, engr, Harrisburg, Pa.

Norristown, Pa.—*J. W. H. Gottshalk, Perkiomenville, Pa., *Wm. G. Just, Gwynedd Valley, Pa., *Whittaker & Diehl, Harrisburg, Pa., and to *Wm. C. Evans, Ambler, Pa., for bridges in various townships, Montgomery County. Roy A. Hatfield, Pres.; D. F. Stout, Clk., Court House, Norristown.

Gratiot, Wis.—*N. H. Shons, Freeport, for two bridges, \$1,598, and Chas. Green, Darlington, \$475. Geo. H. Priestley, auditor.

Hayton, Wis.—*J. Young, Oconto, for 45-ft. reinforced concrete arch bridge, 24 ft. wide, \$10,000.

Madison, Wis.—*John F. Icke, Madison, Wis., for bridge across Starkweather creek on Milwaukee St., \$4,990. Engr., T. J. Harrington. O. S. Norsman, city clerk.

New Diggings, Wis.—*Wm. McCann, Lancaster, Wis.; *Albin Peterson, Argyle, Wis.; *Whitewater Bridge Co., Whitewater, Wis., and *C. E. Camerson, Darlington, Wis., for building 10 bridges in Lafayette county.

Prairie du Sac, Wis.—*Brittenhelm-Hicks Lbr. Co., Sauk City, for 18 culverts. Sauk county highway commission, Baraboo; \$2,500.

Dauphin, Man.—*E. Pilgrim, for building a concrete bridge. Town council.
St. Janoier, Que.—*Gaudette & Lachapelle, St. Ours, for erection of steel bridge and concrete abutments, \$10,000. Municipal council.

MISCELLANEOUS

Jerome, Ariz.—City may vote \$100,000 to build combined city hall, police station and fire house, etc.

New Haven, Conn.—Bids shortly received for building one-story concrete and brick comfort station at Waterside Park for city. G. X. Armhyn, city hall.

New London, Conn.—Bureau Yards and Docks, Navy Dept., Washington, D. C., receiving bids Oct. 14, distributing system. Spec. 3385. About \$270,000.

Washington, D. C. (Bureau of Foreign and Domestic Commerce, Department of Commerce)—An engineer and contractor in India wishes to purchase and secure an agency for the sale of steam and gas tractors, logging outfits, saw mills, and gasoline logging engines. Quotations should be made f. o. b. Calcutta and San Francisco. Cash will be paid. Reference. Refer to opportunity No. 27511.

Washington, D. C. (Bureau of Foreign and Domestic Commerce, Department of Commerce)—A firm in Ceylon desires to purchase or secure an agency for the sale of various kinds of hand and steam pumps for use in agricultural fields and plumbago mines, capable of pumping water to a height averaging 25 feet, the pipe lines to be 2, 4 and 6 inches in diameter. Detailed information in regard to any special lines of pumping equipments is desired. Correspondence may be in English. References. Refer to opportunity No. 27512.

Washington, D. C. (Bureau of Foreign and Domestic Commerce, Department of Commerce)—A firm in Norway is in the market for three electric street water sprinklers, three electric sweeping machines, and two electric drum trucks. These goods are desired for immediate delivery. Refer to opportunity No. 27505.

Pensacola, Fla.—Bureau Yards and Docks, Navy Dept., Washington, D. C., plans to build boatshed. Spec. 3472. About \$60,000.

Mason City, Ia.—Cerro Gordo county rejected all bids Sept. 3 for constructing drainage district No. 57. Geo. E. Trost, auditor.

Great Lakes, Ill.—Bureau Yards and Docks, Navy Dept., Washington, D. C., plans to build three drill halls and install boilers. Spec. 3459.

New Orleans, La.—The capital issues committee at Washington, D. C., has approved the application of the Public Belt Railroad to issue \$600,000 of 5 per cent. bonds, which will be used in building extensions to the government commodity warehouses, shipbuilding plants on the industrial canal, the new cotton warehouse and the public grain elevator. Frank H. Joubert, general manager of the Public Belt. Mayor Behrman.

Hingham, Mass.—Bureau Yards and Docks, Navy Dept., Washington, D. C., plans elevated steel tank. Spec. 3442. About \$13,000.

Nutley, N. J.—Hornblower & Weeks, of New York, successful bidders for the funding and refunding \$55,000 bonds and \$46,000 temporary improvement bonds. Simon Blum, town clerk.

Dayton, O.—Scotch marine boilers, light aluminum die castings and engineer duplicators are wanted at once by the government and local manufacturers are asked to get busy. The war resources committee, Greater Dayton Association, has the specifications.

Germantown, O.—The First National Bank of this city was the successful bidder \$7,000 bonds to meet a deficiency in the treasury of the town.

New Concord, O.—Village has sold to the Ohio National Bank of Columbus deficiency bonds, \$3,000. W. C. Trace, clerk.

Portland, Ore.—The commissioner of public safety has recommended the purchase of four automobiles for use in the bureau of police.

Portland, Ore.—Henry Teal, of Portland, was the successful bidder for the municipal grain elevator series 2 bonds, \$1,000,000. Charles B. Moores, chairman, commission public docks.

Philadelphia, Pa.—Bureau Yards and Docks, Navy Dept., Washington, D. C., plans addition to shipbuilding slips Nos. 2 and 3. Spec. 3469. About \$100,000.

Philadelphia, Pa.—Bureau Yards and Docks, Navy Dept., Washington, D. C., plans to build hangar and runway. Spec. 3463. About \$40,000.

Philadelphia, Pa.—Bureau Yards and Docks, Navy Dept., Washington, D. C., plans to build pattern shop. Spec. 3478. About \$635,000.

Hampton Roads, Va.—Bureau Yards and Docks, Navy Dept., Washington, D. C., plans to build here medical storage building. Spec. 3462. About \$40,000.

Seattle, Wash.—Architect Harold Ginnold, Seaboard Bldg., is completing plans for the construction of a 2-story frame amusement pavilion, 85x75 ft. in size, to be built in Port Angeles, for the Amusement Commission of this district of the federal government, to cost \$12,000.

Seattle, Wash.—Pres. C. E. Remsberg of the Port of Seattle Commission has received official notice from Washington, D. C., that the U. S. Army quartermaster's department has approved the site on the northeast corner of Harbor Island for the location of the proposed government dock and warehouse for the assembling and shipping of war materials from this section. The proposed pier will be 1,100 ft. long, 200 ft. wide; cost, about \$1,000,000.

Tacoma, Wash.—The city budget for the ensuing year calls for an expenditure of over \$250,000 in betterments, the principal items being: Contagion ward,

city hospital, \$1,300; tires for trucks, \$3,000; 5-ton truck, \$6,500; breakwater, \$15,000; paint and carpenter shop, \$4,000; replanking of city waterway bridge, \$4,000; storm culverts above M St., \$3,000; Front St. fill, \$6,000; Union Ave., pave, \$44,000; lining culverts, \$5,000; reconstruction of 37th St. bridge, fire department equipment, \$34,875; repair and painting Puyallup River bridge, \$10,000; repairing and painting City Waterway bridge, \$6,000; extending T St. storm sewer up gulch, \$22,000; extending Monroe St. storm sewers at both ends with combined artifices, pipe and connections, etc., \$23,000; Orchard St., connecting sewers with bay, through park, \$5,000; paving Tacoma Ave. bridge, \$9,000; spray painting machine and sand blast, \$800; blueprint machine, \$800; paving Dock St., \$20,000; sewer cleaner machine and 500 ft. of 2½-in. hose and couplings, \$2,200; city hall, general repairs, \$2,200; install air pump at city barn, \$350. Hearing on above will be held Oct. 7.

Racine, Wis.—Contract soon let by city for remodeling city hall. About \$50,000. P. H. Connolly, city engr.

BIDS RECEIVED AND CONTRACTS AWARDED.

(*Indicates Contracts Awarded.)

New Orleans, La.—*J. Riess, 503 Hibernian Bldg., for about \$39,786 (100 days), building shell house at U. S. Naval Station. Bureau Yards and Docks, Navy Dept., Washington, D. C.

Annapolis, Md.—*Artesian Well Drilling Co., Real Estate Trust Bldg., Philadelphia, for about \$46,500, for building well at radio station at Annapolis navy yard.

Charlotte, Mich.—*Adam Weinschank, Pottersville, Mich., for the first section, and *Theron R. Harrod, Charlotte, for second section of the Duffy extension drain. Total cost, \$6,100.

Austin, Minn.—*E. L. Haines, Owatonna, for judicial ditch No. 4. Tile, \$20,605. Labor, A. D. Kruger, Albert Lea, \$11,998.

Blue Earth, Minn.—*C. F. Henkel, Elmore, for judicial ditch No. 4. 2,250 ft. 22-in. tile, average cut, 7.63; maximum cut, 9.40; labor only; 1,500 ft. 22-in. tile, 36 ft. 22-in. cast iron pipe, 7 bulkheads, approximately 50 yds. reinforced concrete, \$3,419. Jesse L. Herring, auditor. Engr., Carl L. Hagger, Blue Earth.

Valley, Neb.—*Cook-O'Brien Co., Railway Exchange, Kansas City, Mo., for 44,000 ft. of levee work, containing about 120,000 sq. yds., by the Elkhorn Valley Drainage District.

Forman, N. D.—*Denison Tile Works, Fergus Falls, for tile and constructing tile drain through sections 2, 11, 14 and 23 in Sargent drain district No. 16, \$19,590.

Foreston, S. C.—*W. H. Hanna, this city, for constructing the Foreston and Greeleyville ditch, 15 miles in length, 173,000 cu. yd. excavation.

Clint, Tex.—*Lee Moore Construction Co., El Paso, Tex., for earthwork construction on San Elizario feed canal and Yale lateral. Rio Grand irrigation project, at \$14,000.

Galveston, Tex.—*Horton & Horton, of Houston, Tex., for the filling and bulkheading which will be done on the site of the hydroplane station which is being located here under the auspices of the United States Navy, according to the announcement of Lieut. L. B. Hyde, who has charge of the work here for the naval department.

TOO LATE FOR CLASSIFICATION

BIDS ASKED FOR

STATE	CITY	REC'D UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
STREETS AND ROADS.				
Ind., Jeffersonville....	10 a.m., Oct.	7..	Constructing macadam road.....	Geo. W. Stoner, Co. Aud.
Wash., Ritzville....	2.30 p.m., Oct.	7..	Highway construction, involving grading, draining and surfacing 8.7 mi. with gravel or crushed rock.....	F. R. Hewett, Co. Construction Engr.
Ind., Wabash.....	10.30 a.m., Oct.	8..	Constructing gravel or stone road.....	Frank P. Kircher, Co. Aud.
Ind., Bloomington....	2 p.m., Oct.	8..	Road construction	Horace Blakely, Co. Aud.
SEWERAGE.				
N. Y., New York.....	noon, Oct.	7..	Constructing sanitary sewer and outlet sewer, involving 6 to 15-in. vitrified pipe and 10 to 16-in. cast iron pipe	C. B. Van Name, Boro. Pres., Richmond, St. George, S. I.
WATER SUPPLY.				
N. Y., New York....	10.30 a.m., Oct.	8..	Furnishing and laying water mains and appurtenances on Randall's Island.....	Bird S. Coler, Comr. of Pub. Char.
Wis., Milwaukee....	10.30 a.m., Oct.	7..	Improving alley with concrete pavement.....	Percy Braman, Comr. of Pub. Works.
LIGHTING AND POWER.				
N. Y., New York....	10.30 a.m., Oct.	8..	Constructing and installing new steam and return lines from new boiler house to old and buildings of hospital and schools on Randall's Island.....	Bird S. Coler, Comr. of Pub. Char.
BRIDGES.				
Ind., Greencastle.....	2 p.m., Oct.	7..	Constructing or repairing two bridges.....	J. M. Allen, Co. Aud.
Ind., Petersburg.....	2 p.m., Oct.	8..	Repairing bridge, Marion Twp.; repairing three bridges, removing four and constructing eight, Monroe Twp.; constructing eight bridges, Lockhart Twp.; constructing four bridges, Jefferson Twp.....	John D. Gray, Co. Aud.
Wash., Okanogan.....	2 p.m., Oct.	9..	Constructing highway bridge, consisting of three 84-ft. Howe truss spans on concrete piers and abutments; 18-ft. roadway and one 5-ft. walk.....	J. D. Hubbard, Clk., Bd. of Co. Comrs.
MISCELLANEOUS.				
Pa., Philadelphia	Oct. 15..		Collection and disposal of garbage during 1919.....	Dept. of Pub. Works.

STREETS AND ROADS.

Evening Shade, Ark.—Contract soon let for building 14 mi. improved road by commissioners road improvement district No. 1, Sharp county. G. H. Matheny, president.

Helena, Mont.—V. N. Kessler, city clerk, reports council has passed a resolution.

Chickasha, Okla.—For about \$118,792,

lution providing for improvement of Howie St., from Clark St. to Ming St., et al., in district 122, by concrete walks, curbs, etc., at a cost of \$2,000.

Taos, N. Mex.—Taos county plans to expend about \$20,000 relocating and building 5 mi. Canon-Taos Project; bids received soon. J. A. Whittaker, Tramway Bldg., Denver, engineer.

Charlotte, N. C.—American Trust Co. of Charlotte, for three notes for \$30,000 each, payable in one, two and three years, respectively, at \$90,840. The loan was floated to obtain funds to pay the cost of constructing paved roads between Charlotte and Camp Greene by the executive committee of the board of trustees of Charlotte township. W. R. Matthews, chairman.

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WATERLOO IOWA



Grady county plans to build roads and bridges.

Medford, Ore.—Negotiations are now pending for the construction of a motor truck road from the Ready camp, 45 miles out, to Medford. A \$30,000 fund it is understood has been guaranteed or to be guaranteed by the local business men toward completing the first unit of the road.

Philadelphia, Pa.—With a view of improving the transportation facilities of the city Director Datesman, of the department of public works, has arranged to develop several new streets in the lower portion of West Philadelphia. The streets to be developed are Lansdowne Ave., from 64th to 65th St.; Peach St., from Florence Ave. to Warrington Ave.; 53d St., from Florence Ave. to Warrington Ave., and 60th St., from Chester Ave. to Springfield Ave. The streets to be constructed are to be built of asphalt, and the Government plans provide for the construction of approximately 150 houses in all of the streets. In addition Haverford Ave., between Lansdowne Ave. and a point near Malvern Ave., is to be improved with the construction of rubble gutters. Other work to be done includes the repairing and painting of several bridges which now are in greater use because of the increased traffic due to the war. They are the Evergreen Ave., the Glenwood Ave., the Ontario St. and the Sedgley Ave. bridges.

Seymour, Tex.—\$300,000 in bonds voted by Baylor county to build roads.

Wharton, Tex.—Contract grading and surfacing 12.3 mi. road shortly let by Wharton county. W. G. Davis, county judge.

Chehalis, Wash.—The state highway commission approved the paving of 9th St. and an alley in Chehalis and the construction of sidewalks and other streets, the entire work amounting to approximately \$15,000.

Olympia, Wash.—Highway and street improvement projects to cost \$82,186 were recommended by the state highway contract at \$53,870 and the purchase of a carload of cement for Pierce county highway maintenance work.

Olympia, Wash.—Approval of the state highway commission was given to the

completion of a contract for surfacing 19 miles of the central Washington highway between Ritzville and Sprague. 62 per cent of it is already finished. The state commission also approved a contract for surfacing eight miles of permanent highway No. 4 from Ritzville to the Adams county line, 65 per cent. of which is completed. Approval of an improvement of highway from Omak north to Okanogan county is also granted.

Pullman, Wash.—The three-mile stretch of unimproved road between the Lewiston hill road and the Uniontown macadam will be improved next year, thus completing the highway, according to State Highway Commissioner James Allen. Harold Doolittle, district engineer, for the highway department.

BIDS RECEIVED AND CONTRACTS AWARDED.

(*Indicates Contracts Awarded.)

Kansas City, Mo.—J. E. Walsh, 1122 East Gillham road, for paving 5,535 sq. yd. Mulberry St., from 9th to 13th St., and 4,790 sq. yd. 8th St., from point 279 ft. east of Santa Fe to Madison Ave., granite block, \$42,841 and \$37,075, respectively; 8,822 sq. yd. Hickory St., from St. Louis Ave. to West Kansas Addition No. 2 and 2,948 sq. yd., 13th St., from Liberty to Mulberry St., granite block, to F. P. McCormick, 2309 Pennsylvania Ave., \$68,194 and \$22,788, respectively. Board public works.

Staten Island, N. Y. (Boro. Richmond)—C. Vanderbilt, West New Brighton, S. I., at \$5.42, paving, per sq. yd.; total, \$35,938.50. John E. Donovan, Port Richmond, S. I., \$5.60 per sq. yd., \$37,832.50. Jos. Johnson's Sons, West New Brighton, S. I., \$5.45 per sq. yd., \$36,760.75. Cramer & Leedecke, New York City, \$5.17 per sq. yd., \$33,362.35, bidders for 4,925 sq. yd. granite block pavement on 6-in. concrete foundation. Boro. Richmond, N. Y., Aug. 27.

Portland, Ore.—Warren Construction Co., only bid received for the improvement of East Sherman St., from the east line of East 34th St. to the east line of Stratford-Sydney Addition; gravel-bitulithic pavement in roadway

at \$2.10 per sq. yd., \$4,025.90. City council.

SEWERAGE.

Santa Ana, Cal.—Santa Ana, Anaheim and Orange may build an outfall sewer system to the sea in the near future.

Brighton, Colo.—All bids received by city for building sewers in northern, eastern and southern sections of town were rejected; will readvertise. Work involves 5,900 ft. 12 in. sewer pipe, 3,000 ft. 8 in. pipe, sanitary sewer, trenching, laying pipe, building septic tank, etc. About \$80,000. R. D. Salisbury, 1415 East Colfax Ave., Denver, engr.

Garret, Ind.—City Sept. 19 rejected only bid received for building 1,080 ft. 12 in. vitr. pipe sewer in Keyser St. from alley at block 91 to 2nd St., also 700 ft. 10 in. and 260 ft. 8 in. vitr. socket sewer laterals; will be readvertised.

Astoria, Ore.—The city engineer has been instructed to prepare plans and specifications for the construction of a permanent sewer at First and Astor Sts.

BIDS RECEIVED AND CONTRACTS AWARDED.

(*Indicates Contracts Awarded.)

Torrington, Conn.—*Gildo Valli, 232 Oak St., at \$6,995, for building outfall sewer in Park Ave., King St. and River Dr., Sect. 1. *Ossola & Bessozi, 164 Pythian Ave., at \$8,025, Sect. 2, for labor only, city to purchase material; work involves 3,000 ft. 36 in. segmental block sewer, about 1,800 cu. yd. earth trenching, also gage house at Naugatuck River; cost about \$3,500.

Brooklyn, N. Y.—*Murphy Bros., 25th and Cropsey Ave., at \$14,970 for building sewers in 37th and Bay 38th Sts., from Benson Ave. to sewer summit. City council.

WATER SUPPLY.

Minot, N. D.—The Minot city commission has issued \$116,000 in bonds for the construction of a water reservoir re-

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Bids received until October 15, 1918.

Sewage Disposal System

BROOKLYN, N. Y.

Notice to Contractors.—Sealed proposals for Sewage Disposal System, Creedmore Division of Brooklyn State Hospital, Brooklyn, N. Y., will be received by the State Hospital Commission, Capitol, Albany, N. Y., until 3:00 o'clock P. M. on Tuesday, October 15, 1918, when they will be publicly opened and read. Proposals shall be enclosed in an envelope furnished by the State Architect, sealed and addressed, and shall be accompanied by a certified check in the sum of five per cent. (5%) of the amount of the proposal. The contractor to whom the award is made will be required to furnish surety company bond in the sum of fifty per cent. (50%) of the amount of contract within thirty (30) days after official notice of award of contract and in accordance with the terms of Specification No. 3076. The right is reserved to reject any or all bids. Drawings and specifications may be consulted at the Brooklyn State Hospital, Brooklyn, N. Y., at the New York office of the Department of Architecture, Room 1224, Woolworth Building, and at the Department of Architecture, Capitol, Albany, N. Y. Drawings and specifications and blank forms of proposal may be obtained at the Department

of Architecture, Capitol, Albany, N. Y., upon reasonable notice to and in the discretion of the State Architect, Lewis F. Pilcher, Capitol, Albany, N. Y.

E. S. ELWOOD,
Secretary, State Hospital Commission.

quired for bettering the city's fire protection.

Superior, Wis.—The question of purchasing the water, light and power plants of the Superior Water Light and Power company will be submitted to the voters at Nov. 5 election. Mayor Fred A. Baxter.

LIGHTING AND POWER.

Sioux Falls, S. D.—Citizens petition city council to issue \$300,000 bonds for the establishment of a municipal power plant.

Superior, Wis.—See "Water Supply."

BIDS RECEIVED AND CONTRACTS AWARDED.

(*Indicates Contracts Awarded.)

Anderson, Ind.—*The Hatfield Electric Company, Indianapolis, for three boilers and stokers for the city electric plant, cost \$94,400. Board of Pub. Wks.

Galway, N. Y.—*J. Tittlemore, Galway, for the erection of a new extension to the power plant at the County Tuberculosis hospital; cost \$12,000. The Board of Supervisors of Saratoga County.

FIRE EQUIPMENT.

Bend, Ore.—City at an election Sept. 25 voted \$20,000 bonds for the proposed improvements—purchase of an engine and building a combined fire house and city hall. A Portland bonding house has agreed to take the bonds and bids for the material will be asked immediately.

BRIDGES.

Chickasha, Okla.—See "Streets and Roads."

MISCELLANEOUS.

Detroit, Mich.—Alderman William P. Bradley's Port of Detroit committee will

recommend to the common council the building as soon as possible at least one, and probably three, municipal docks and warehouses for the handling of package freight.

Bend, Ore.—See "Fire Equipment."

Eugene, Ore.—Subscriptions totaling \$8,000 toward a fund of \$25,000 to be raised by the business men of the city for building a barracks at the University of Oregon were made at a recent meeting at the Chamber of Commerce. Plan to build the building, which will enable the university to comply with its contract with the United States Government to care for men sent here for training in the students' army training corps, was given approval. A committee was named to solicit other business men in raising the remaining \$13,000.

Portland, Ore.—Two hundred homes, to cost between \$2,500 and \$3,500, are to be built by the Metropolitan Investment & Improvement Co., of which Harvey Beckwith is president, according to an offer made to mayor Baker, chairman of the housing committee. The building of the houses will begin immediately, providing the housing committee accepts the offer. The houses are to be built near carlines and on graded streets. Organized labor, it is said, has agreed, if the company will pay standard wages, as it plans, and if the housing committee approves the plan, to proceed actively with construction.

Salem, Ore.—The city of Astoria has filed three complaints with the public service commission against the S. P. & S. railroad for the purposes of obtaining authority to construct three grade crossings over the company's tracks. The city says that the grade crossings are needed to give access to public wharves being built by the city, one at the foot of Thirty-second street, another at the foot of Tenth street, and the third at the foot of Columbia avenue.

Seattle, Wash.—Announcement was made officially that the board of directors of the Puget Sound Traction, Light & Power Company, in Boston, had accepted Seattle's offer to purchase the company's street car lines at a cost of \$15,000,000. The city will issue 20-year public utility bonds with which to make the purchase.

Ottawa, Ont.—Commissioner of Works A. F. Macallum will purchase an electric thawing device for thawing services, etc., for the city.

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without boiler 1,000
With boiler 2,300
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engine, without boiler..... 350
With boiler 550
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1—12x12 Laidlaw-Dunn-Gordon, belt driven,
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driven, capacity about 300' at 80 to
100 lbs. 600
1—Sullivan, 2 stage air, simple steam, ca-
pacity 1800' at 80 to 100 lbs..... 2,500
2—14x12 Bury Duplex, belt driven, capacity
about 550' at 60 to 80 lbs., each..... 1,000
1—14x16x10x16 Sullivan, 2 stage air, simple
steam, capacity 600' at 80 to 100 lbs.... 1,500
1—14x9x10 Bury, 2 stage, belt driven, ca-
pacity 350' 1,500
1—Ingersoll-Rand Imperial Type XB1, 500'.. 2,000

DRAGLINES

Price
1—Monaghan-Walker steam machine, with
50' boom, 1½ yd. bucket, almost new....\$7,000
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type boiler, firebox 150 lb. pressure; boom,
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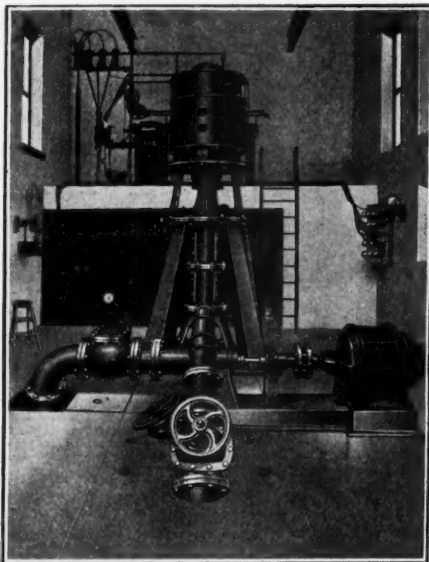
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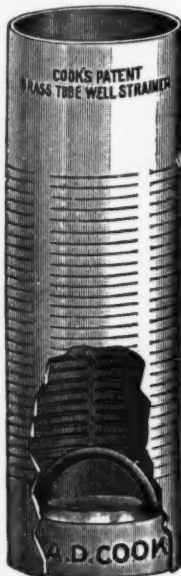
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Wrapt in the mantle of oblivion,
The old, gray, wrinkled husbandman has gone
Sowing and reaping, lone and desolate—
The blare of trumpets, rattle of the drum,
Disturb him not at all—he sees,
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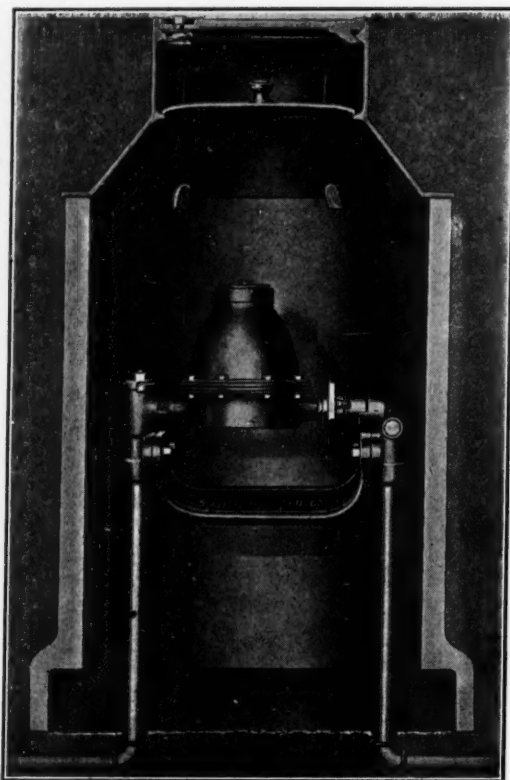
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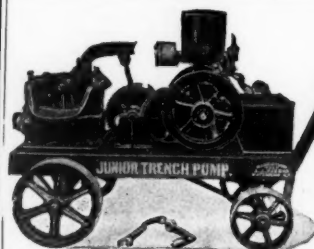
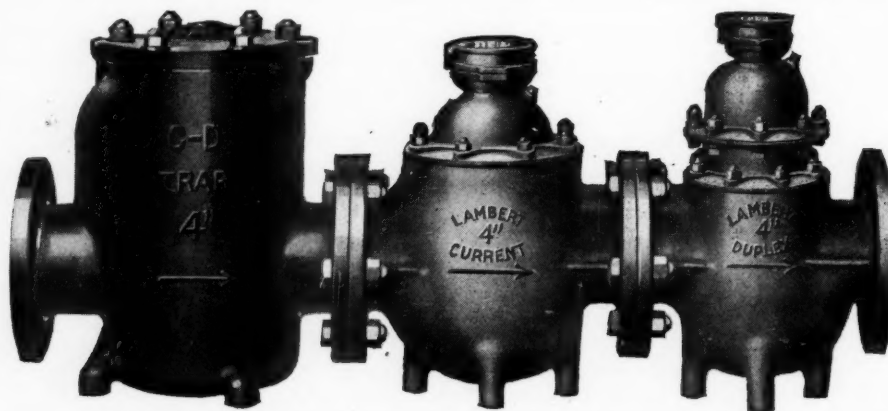
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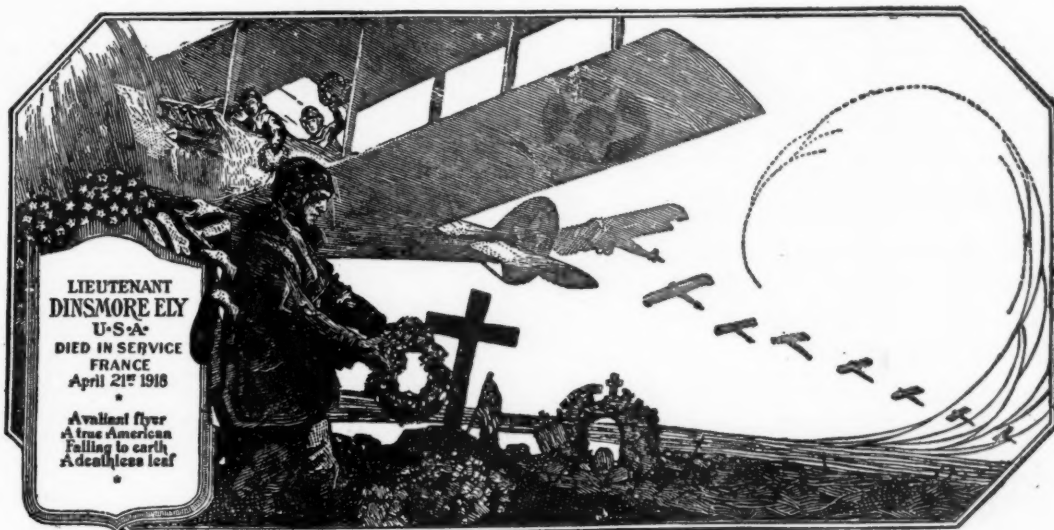
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Some of us are far behind the fighting lines of France today. For circumstance has made two battle lines, and there must be therefore those gone to fight, and others kept behind to carry on at home.

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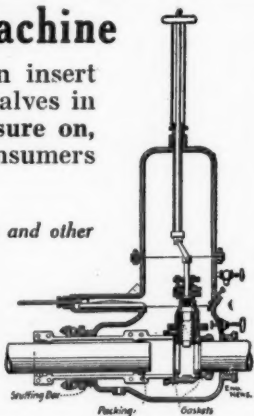
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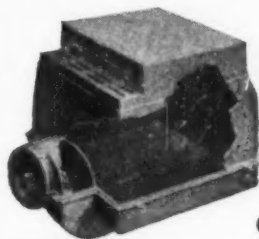
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(See Paving Machinery also.)

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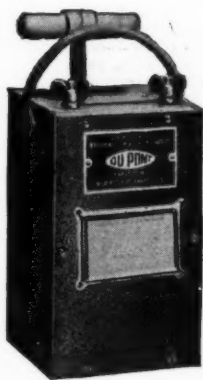
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| <input type="checkbox"/> Bridgeport Wood Finish | <input type="checkbox"/> Soluble Cotton |
| <input type="checkbox"/> Metal Lacquers | <input type="checkbox"/> PONTOKLENE |
| <input type="checkbox"/> Pigment Bases | <input type="checkbox"/> Tar Distillates |

NAME

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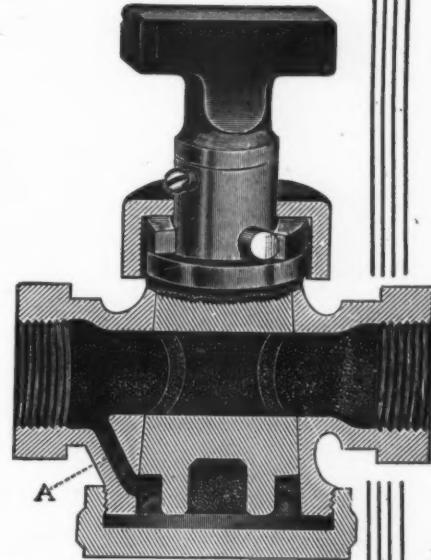
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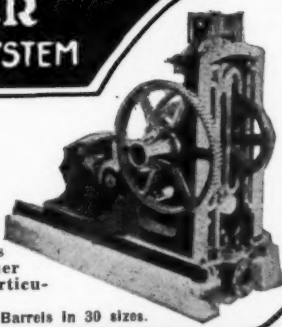
NEW YORK

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*End of submerged
part of line*



*Through the forest
and uphill*



*Dense tree growth
and swamp*

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THE SUMMARY The all land route involved greater expense than seemed justified, while the cost of the shorter route would likewise be formidable should the submerged portion be laid with pipe of ordinary type.

THE DECISION After severe and exhaustive tests which proved that Universal Pipe "was adapted for continuous submerged pipe laying," the shorter route was chosen.

THE RESULT Just as soon as the standard six-foot lengths of Universal Pipe were received, the 35,000-foot line was started—through jungle ravines—over swamps—under 24 feet of water—up and down hills—with just ratchet wrenches and not a calked joint!

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LITERATURE ?

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